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The Impact of IFRS on FDI Indicators

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Contents

CHAPTER 1: INTRODUCTION

1.1 Background

This chapter presents background information regarding global IFRS implementation. The chapter begins by discussing the history of IFRS and its ever growing popularity and continues on to discuss the necessity of a global set of standards and the benefits that may result from it. Additionally, the challenges of implementing global accounting standards are discussed and a case for the role of Agency Theory in establishing IFRS is presented. This chapter also alludes to my theory of multi-agency, a substantial relationship that underscores the development and establishment of a single set of accounting rules across countries which have long been governed by local or national GAAPs. This chapter brings to the forefront the main problems which are under investigation and presents essential data for analyzing other issues in later chapters such as the effects of IFRS at the macro-economic level. What will changes in reporting standards do to the data companies present to investors? If full adoption is the goal and were successfully achieved, including IFRS as a tax base, what would occur as the standards are implemented? How would company data be reinterpreted, what effect would this have on FDI? How would government tax revenue be affected? In turn, how would the combination of changes in FDI and tax revenue affect the health of the nation, or in a more simple term, how would GDP be affected? These are just some of the major concerns being addressed that will greatly enhance the highlight the significance of the study.

So what are IFRS, they're a set of global international accounting standards designed to help equalize financial reporting globally. In the past several decades IFRS have continued to garner global support and have been implemented throughout the world. This accounting revolution began as an effort by industrialized nations to create a set of accounting standards that could be easily implemented by smaller nations that were unable to create their own. However, as the world became more global, regulators, investors, companies, and auditing firms began to realize the vital importance of a common set of accounting standards. (AICPA1)

International accounting standards first came to prominence during the late 60s and early 70s but only really started to gain momentum in the last few decades. Since then there have been numerous attempts to implement some form of global harmonization or standardization in an attempt to simplify financial markets internationally and encourage capital investment. It is important to note that there is a significant difference between the term harmonization and standardization. Harmonization attempts to move away from diverse forms of accounting towards a common standard, while standardization on the other hand is agreement between various governing entities to utilize the same accounting standards (Ellwood, 2016). In either case the objective, in short, is to provide financial information that is useful in making decisions regarding buying and selling or holding equity and debt instruments, and providing or settling loans and other forms of credit (Ellwood, 2016). Additionally International Financial Reporting Standards (IFRS) reduce information asymmetry, reduce home country bias and thereby enhancing the appeal for foreign investors. With that in mind, simply attaching the label of IFRS is insufficient to procure foreign investors. The research of Hansen et al, shows a strong correlation between company transparency and foreign investment and further demonstrates that IFRS adoption can mitigate the extent of home bias when applied rigorously (Hansen et al., 2013).

"The objective of financial statements is to provide information, about the financial position, performance, and changes in financial position of an entity, that is useful to a wide range of users in making economic and investment decisions" (KMPG). The use of IFRS has the potential to reduce earnings manipulation and improve stock market efficiency. According to recent research, there is no question that IFRS adoption provides various benefits by enhancing comparability of financial statements, lowering transaction costs, providing access to international capital, and increasing international investment (Dunne *et al*., 2008). Higher quality accounting and transparency enable investors to make informed decisions, as they attempt to predict the firm's future performance.

The information provided by annual reports is used for analysis and decision-making purposes. Due to variations among accounting methods, legal systems and cultures, the data is often presented in contrasting

ways that can be misleading when comparing financial data between companies. Despite this challenge, a wealth of information is provided in these reports which enable useful comparisons to be made. In comparing these reports it is essential to insure that the accounting practices do not differ to an extent that the comparisons are meaningless. Though the trend toward globalization continues to hold sway and the move towards a single set of standards looks ever closer, regional accounting will continue to play a notable role.

Today, more than 174 jurisdictions throughout the world are utilizing some form of IFRS for accounting purposes. Many jurisdictions still utilize their own local GAAP. However, they claim that it is based on, similar to, or converged with IFRS. (Deloitte1) throughout most of Europe IFRS is the accounting standard utilized for both reporting and statutory filings. In other jurisdictions such as the US however, IFRS are used simply for reporting to investors and hold no bearing on statutory filings. While the United States is not formally adopted IFRS has stated that its accounting practices under US GAAP are equivalent to IFRS Via Convergence. Similarly other major economies such as Japan India and China have yet to fully adopt, however, they are steadily working towards convergence. (PriceWaterhouseCoopers1, 2014)

1.2 Why Hasn't the World Standardized

The reason for the delay in implementing IFRS globally is that the standards have the potential to affect financial figures and reporting throughout companies, industries and economies. IFRS becomes extremely important when we consider common issues such as capital fundraising which has become a very international activity. Given that most nations utilize some form of local generally accepted accounting principles (GAAP), it is extremely challenging, for international investors to effectively evaluate the quality of a company and understand its financial position. By standardizing the reporting method, international investors are able to make more informed decisions and better understand the complex dealings of multinational corporations (PriceWaterhouseCoopers1, 2014). The research of Maines et al. provided a splendid example of the differences when investors compare companies via return on equity (ROE). If for example, Glasco SmithKline's financial statements are prepared under GAAP and Smith and Nephew's

financial statements are prepared under IFRS, then GSK will show and an ROE of 12.9% as compared to a more attractive ROE of 34.3% for S&N. If we were to reverse the circumstances however, under IFRS, GSK's ROE would be 58.6% versus 31.8% for S&N. (Maines et al., 2009)

Table 1. GAAP vs. IFRS

	2006					
	Net Income		Stockholder's Equity		Return On Equity	
	IFRS	GAAP	IFRS	GAAP	IFRS	GAAP
GlaxoSmithKline PLC*	5,498	4,465	9,386	34,653	58.6%	12.9%
Smith & Nephew PLC^	745	709	2,174	2,227	34.3%	31.8%

* *Net Income and Stockholder's Equity amounts for GlaxoSmithKline PLC in millions of Euros.*
^ *Net Income and Stockholder's Equity amounts for Smith & Nephew PLC in millions of U.S. dollars.*
Sources: GlaxoSmithKline PLC (2007), Smith & Nephew PLC (2007)

(Figure 1.1: One World - One accounting-page 532)

1.3 Objective

IFRS are designed to equalize reporting standards globally by bringing reporting transparency to FDI. This study aims to identify; 1) implementation and IFRS compliance among companies, 2) changes in reporting under IFRS, 3) the impact of IFRS on financial ratios as a means of observing shifts in leverage, and 4) the impact of these changes on GDP statistics, and key economic indicators for FDI. In pursuing this research the author has also demonstrates the inseparable relationship between investors, companies and governments and puts forth that the future success of IFRS requires a properly functioning multi-agent relationship.

1.4 Motivation

My primary motivation was to identify the realistic value or impact of IFRS at the macro level. I undertook this research task to fill a large research gap in our knowledge of the macroeconomic impact of IFRS implementation. My second motivation is to understand the real impact IFRS might have if implemented for statutory information filing to include taxation. It is my hope that better understanding this information could

be beneficial to countries still contemplating or holding back from the shift to IFRS. This information will present a basis for analyzing the effect IFRS on macro economies and the shifts that could potentially accompany full IFRS adoption by the top global economies.

1.5 Research Problems

What impact would IFRS implementation have on global economies, what would they do to the macroeconomic environment?

There have been few research studies which reviews the relationship between Financial Ratios and GDP, there is a large information gap related to the affect IFRS will have on companies, investors, and economies in the macroeconomic environment. My research aims to examine the changes IFRS adoption may cause on company reporting and GDP. My study contributes to professionals around the world by providing in-depth information that can influence managerial decisions related to IFRS implementation, economic and corporate health and indicators for Foreign Investors.

1.6 Research Questions

There are a number of questions that the topic of IFRS poses for any country contemplating adoption. But perhaps some of the most relevant would be to answer how IFRS affect financial indicators and would they have a notable impact on FDI? Even more specifically, if IFRS were implemented, how would the changes in financial reporting affect GDP? To reach these vital questions we might first have to discover and understand the factors which are limiting adoption and preventing implementation which leads the author to ask whether there is an Agency relationship. If we look at the effect of IFRS on national economic data, or rather if we analyze the macro-economic impact, will it be influenced by the implementation of IFRS? If both financial reporting figures as well as national macro-economic data are being affected by IFRS how might this shift the data present to and analyzed by the investors?

If full adoption is the goal and were successfully achieved, what would occur as the standards are implemented? How would company data be reinterpreted, what effect would this have on FDI? How would government tax revenue be affected? In turn, how would the combination of changes in FDI and tax revenue affect the health of the nation, or in a more simple term, how would GDP be affected? These are just some of the major concerns being addressed that will greatly enhance the overall significance of the study.

1.7 Hypothesis

To address these questions and guide the research in an organized fashion, four hypotheses are put forth to be validated or disproven in turn. The first, H1: IFRS can alter financial ratios significantly. This is a primary one to consider as the influence of IFRS are financial reporting has the power to influence both management and investor decisions and therefore is a point worth clarifying before adoption is even considered. Next, H2: IFRS implementation applied to the largest companies, by revenue, within an economy can affect GDP significantly. If IFRS can affect the ratios to question whether they can impact the another major metric for investment considerations, a countries GDP. Assuming H2, then research seeks to address H3: IFRS implemented across a global economy for statutory filing can shift economic wealth. Finally, the author puts forth H4: Successful IFRS implementation needs cooperation from investors, companies & governments. This is essential to understanding the relationships between the primary actors in IFRS implementation and understanding what the influences at each level. Additionally, failure in the agency relationship would constitute a failure in the utilization of IFRS and ultimately endanger investors as they've drawn by the promise of transparency afforded by IFRS and a violation of agency would ultimately be a violation of investor considerations, a condition best identified quickly.

1.8 Research Methodology

This research focuses on accomplishing three primary tasks. The first is to present the basis of the author's theoretical model, hence forth referred to as multi-agency. The purpose and value of this model comes in helping to assess the relationships between investors, companies and governments. It is not a tool of calculation but rather a tool of analysis. Though a tool of original creation based on game theory and classic agency, it was later found to encompass and combine interest theory, group theory and the Haber mas' approach into one comprehensive reasoning tool that can help assess a countries' investment worthiness as well as help clearly identify factors that may present challenges or barriers to IFRS adoption.

Next, a historical analysis of the accounting systems of the sample selection is presented. It presents the background and history of economics and society that have shaped the more modern day accounting standards and helps to clarify the challenges faced by non-adopters. It further presents details about the quality of the accounting systems, their level of transparency and enforcement as well as utilizes the multi-agency model to analyze potential IFRS implementation failures and barriers to proper application. This helps to establish proof as to why convergence tends to be the elected choice of implementation.

Finally, this research analyzes shifts in GDP and financial data for the top 10 global economies and their top 25 listed companies, in the years of IFRS adoption and the 2012 fiscal year. It attempts to determine whether IFRS based information, if utilized in statutory reporting could potentially shift financial ratios or GDP figures and ultimately impact economic and corporate valuations and FDI.

1.9 Theoretical Framework

This study is based on extensive literature review which supports the author's assumptions on the effects of IFRS in a global economy as well as the existence of Multi-agent relationships which plays a key role in and the implementation of IFRS. The relationship at the microeconomic and macroeconomic levels is evaluated to

determine the current level of accounting quality and the benefits IFRS may present. Moreover, the model empirically examines data collected from companies, global financial analysis data from organizations such as the World Bank and International Monetary Fund (IMF) as well as the data presented by IFRS development bodies.

The framework of this research assumes the implementation of IFRS will improve the quality of accounting information and that this will ultimately translate to increased foreign investment. The underlying assumption that undermines this possibility is the existence of the multi-agency relationship which demonstrates the difficulties that threaten foreign investment and standard adoption by government entities. The quality of financial information provided in financial statements is highly relevant to for both the investors and the governing agencies and unquestionably influential in relation to the user's decisions as relevant information has confirmatory or predictive value as they demonstrate historical patterns for current and past market and corporate activities.

The analysis performed in this study demonstrates the effects of IFRS adoption following implementation and presents realistic demonstrations of the potentially likely outcomes of IFRS implementation. At the same time, it demonstrates to other financial users the pitfalls of the IFRS hype and presents proof that while ideally adoption should present primarily benefits, in some cases it can be used to the detriment of investors and other users of financial information. The data is not always presented appropriately and in good faith thus reducing the comparability, transparency, and relevance of the data.

Within the framework and conceptual issues presented in this study we will address the hypotheses are develop a clearer understanding of the relationship between the adoption of IFRS and the factors that influence the decision and adherence to the IFRS model. The first study will deals with establishing a viable basis for the existence of the multi-agency model and demonstrating the validity it presents in determining decisions for all parties involved in the process of IFRS adoption and usage. It focused on showing the relationships between the parties their overlapping interests as well as the asymmetric information problems

that hinder IFRS adoption efforts. This is accomplished in conjunction with three pre-existing theories that support and validate the model created by the author. Though identified after the initial multi-agent model was presented, the three theories, if used in conjunction, can provide the same evaluation capabilities as the multi-agency model.

The second stage closely analyzes the regional economies and identifies the cultural, societal and political factors that make create a fertile environment for meaningful IFRS implementation or conversely highlight the shortcomings that might indicate and illegitimate attempt to implement IFRS. Specifically the historical accounting for each economy is looked at as well as the current practices and an evaluation of transparency practices. The aim of the section being is to show the realistic results and evaluate the effectiveness of implementation.

The third section focuses on historical proof to present proof that IFRS adoption has a notable impact on economic markets. By analyzing IMF data of a historical periods preceding and following he point of adoption , we are able to clearly see market trends and make reasonable assertions about the effect IFRS implementation played in the market results.

Finally, by comparing statutory financial ratio data present by Reuters and comparing it to IFRS based calculations we are able to present further proof of the substantial effect IFRS pose on markets and market players. It serves as a further support for the data presented in the World Bank data and demonstrates from a direct vantage point, that of the investors, the influential impact of IFRS on macroeconomic data used for investment and adoption decisions.

1.10 Contribution

Generally, the findings from this study contribute to the ongoing debate on whether the adoption of IFRS enhances the quality of financial reporting by providing evidence from a macroeconomic vantage point. The

study examines the effect of implementing IFRS and could be useful to contribute to accounting harmonization literature in on a global level. The study provides insight into issues that influence policy makers and guide the decision making process. For instance, this study will demonstrate via the effects of IFRS implementation on the 2012 financial statements, disclosures and other accounting information.

The findings may also be relevant to international regulators and institutions involved in the process, since the results provide example of how firms required to applying IFRS have approached the process in specific country. The finding may be beneficial in meeting the IASB's objective, particularly its third objective 'to promote convergence between national accounting standards and IFRS' has been accomplished in developing countries. The results of this study can also be used to better comprehend the extent of harmonization of IFRS among developed economies so that the IASB can devise more suitable strategies and apt accounting standards. In short, this research contributes to the global discussion on the effect of IFRS-based accounting standards in a macro setting.

1.11 Structure of Thesis

This dissertation is divided into e chapters. The remainder of Chapter 1 presents the author's case for the role of Agency Theory in establishing accounting standards and implementing them. This chapter also alludes to the existence of a more substantial relationship, henceforth referred to as multi-agency, that underscores the development and establishment of a single set of accounting rules across countries which have long been governed by local or national GAAPs. This brings to the forefront the main problems which are under investigation. Chief among these being what affect will IFRS have at the macro-economic level. What will changes in reporting standards do to the data companies present to investors? If full adoption is the goal and were successfully achieved, what would occur as the standards are implemented? How would company data be reinterpreted, what effect would this have on FDI? How would government tax revenue be affected? In turn, how would the combination of changes in FDI and tax revenue affect the health of the nation, or in a

more simple term, how would GDP be affected? These are just some of the major concerns being addressed that will greatly enhance the overall significance of the study.

Chapter 2 gives in-depth information which explains the need for international financial reporting standards, a review of studies which provide a basis for the construction of a model or theoretical framework, related to the effects of IFRS implementation on company financial reporting information, which will also serve as a basis for this study's hypothesis, and finally the need for a well-defined understanding of the broad reaching affects IFRS will have on a global macroeconomic scale.

Chapter 3 discusses IFRS implementation and the affect it has on company financial reporting. It looks closely at the strongest publically listed companies within the top economies and demonstrates the varying effects of IFRS on financial figures in contrast to those prepared under traditional models such as US GAAP and other popular reporting standards. In each case the most influential IFRS for each company will be closely examined in order to assess the greatest impact on financial figures.

Chapter 4 analyzes the history of accounting in the China, Japan, Russia and India to better understand the factors to influence accounting methods.

Chapter 5 analyzes the history of accounting in the US and Brazil to better understand the factors to influence accounting methods.

Chapter 6 analyzes the history of accounting in the EU to better understand the factors to influence accounting methods.

Chapter 7 analyzes the impact of IFRS on GDP, FDI and other Economic indicators among the sample economies in this study.

Chapter 8 contains a financial ratio comparison and analysis for the EU countries included in this study. It concludes with a final summary of the study's findings and discloses conclusions drawn from the findings. A discussion of any challenges faced in pursuing this research as well as recommendations for further study will also be included.

CHAPTER 2: AGENCY AND LITERATURE REVIEW

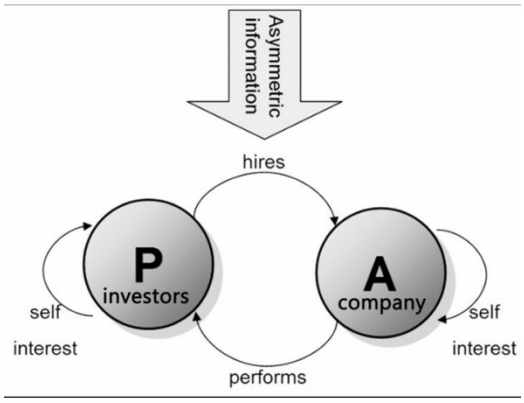
2.1 The Role of Agency Theory

The theory of agency was developed independently by both Stephen Ross and Barry Mitnick in 1973. Ross is credited with originating the theory of agency in the area of economics. He clearly identified the agency problem as being generic to society. Ross's approach focused on the problems innate within agency relationships and identified significant existing problems and variables dealing with them as a decision based incentive problem, ignoring the components that wholly constituted the agency relationship. Mitnick concurrently developed the institutional theory of agency. His approach, while overlapping in areas, focused primarily on the relationships within institutions, specifically focusing upon the relationship between managers and employees. Their works are essentially parallels and both avenues of research stem from basic imperfections found in agency relationships (Mitnick, 2013). To fully understand the theory of agency it is important to consider both economic and institutional theories.

The theory of agency is a supposition that explains the relationship between principals and agents in business. Agency theory is primarily concerned with resolving problems that exist in agency relationships; that is, between principals (such as shareholders) and agents of the principals (for example, company executives).

Agency theory addresses two concerns: “the problems that arise when the desires or goals of the principal and agent are in conflict and the principal is unable to verify the agent's actions.’ and ‘the variance n risk tolerance which may lead the principal and agent to take different actions” (Caers DuBois, et al.2013).

Figure 2.1: Standard Principle-Agent Example



The theory of agency derives its basis from the law of agency which is defined as a consensual relationship created by contract or by law where one party, the principal, grants authority for another party, the agent, to act on behalf of and under the control of the principal to deal with a third party. An agency relationship is fiduciary in nature and the actions and words of an agent exchanged with a third party bind the principal (DeMott, 2003). One important factor to note is that in a simplistic agency model there is only one point of information asymmetry.

But perhaps we might more specifically define agency as a situation wherein an agent acts on behalf of a principal within the scope of his authority which has been granted to him expressly or can be implied from the circumstances. The Agent's actions bind the principal and the third party unless it follows from the circumstances of the case that the agent under takes to bind himself only (Easley and Kleinberg, 2010). The theory of agency is plagued by the problem of information asymmetry; a situation in which one party in a transaction has more or superior information than another. This causes potentially harmful situations because one party can potentially take advantage of the other party's lack of knowledge (Akerlof, 1970). Management and investors are constantly in need of vast amounts of high quality data thus enabling them to make well informed decisions that minimize risk and maximize return. Time and cost constraints often make perfect information impossible and the pursuit of it unrealistic. Information asymmetry is inevitable. Even if two

parties are granted access to the same information, there is generally private information which will not be shared. Even if both parties were to receive the private information, the interpretation and extraction of useful details from the information would be unlikely to yield equivalent results, ultimately leading to agency costs.

2.2 AGENCY OR STEWARDSHIP

For the purposes of this paper, explanation is limited to the examination of information asymmetry between companies, financial markets, and government, focusing on information asymmetry and assuming 'There is goal conflict between the principal and the agent.' "Agents have more information than principals, which can be exploited for self-gain" (Van Slyke, 2007). At this point, it is important to mention another viable theory as well. A case for the application of stewardship theory could be argued as an alternative to a standard principal-agency approach. Stewardship theory holds that managers, left on their own, will indeed act as responsible stewards of the assets they control. In American politics, an example of the stewardship theory might be a president governing based on their belief that their duty is to do whatever is necessary in national interest, as opposed to one group or body (Marguiles, 2014). Though it could be argued that bureaucracy is better approached by way of stewardship theory, an evolved principal-agent relationship often develops, which mirrors some of the practices put forth under stewardship theory (Van Slyke, 2007).

Both agency theory and stewardship theory deal largely with trust and a belief, one way or another, as to whether agents work for the benefit of the principal or whether they require more specific motivation. Agency theory, in its assumption that an agents' self-interest will interfere with principals agenda deals largely with incentive programs for aligning interests. Stewardship is more often than not applicable in instances where financial remunerations are not possible and the currency of incentive is instead, replaced by the status of reputation. This is most readily seen in the relationship between politicians and constituents.

Failure to adhere to the agenda of constituents can lead to significant and immediate consequences, perhaps chief among them being the destruction of reputation which acts as a sanction. This same incentive "scheme" can be applied in instances of evolved agency relationships. Agents achieve reward in the form of

enhanced reputation and sanction in the form of damaged credibility. In instances such as bureaucratic oversight where market share maybe devoid of competition, diminished reputation may have no adverse effect on a provider's opportunity for continued contracting in the way that agency theory suggests that it should (Van Slyke, 2007).

2.3 Establishing the Principal-Agent Relationship

In a traditional principal-agent relationship, such as that observable between shareholders, i.e. investors, and the management of listed companies, shareholders act as the principal and invest in a company expecting an acceptable return on their investment in the form of dividends or similar remuneration. In contrast, managers are interested in maximizing their own gains which are most often achieved by maximizing the profit of the company. The contrasting interests are usually overcome by means of incentive plans. Examples include; the granting of stock, stock options, and bonuses to promote practices that align managers interests with of the investors (Zhang, et al. 2008).

It can be argued that a similar situation exists between investors and government or bureaucrats. Investors desire to maintain all of the benefits and protections of government. Taxes are levied against them in order to fund these efforts. The investors, i.e. constituents, expect government and their elected bureaucrats to work in their best interest. Individuals or groups prefer optimizing their own gains to sacrificing for the benefit of another individual or collective. Therefore agents will often pursue actions that benefit them, regardless of the consequences inherent to the principals (Meckling, 1976).

Although governments, or bureaucrats, act in the role of agents, history has repeatedly demonstrated that in the political arena, self-interest tends to prevail over principal interest. Additionally with so many elected bodies being pressured from various angles, it is difficult to ensure that a principal's needs are met at all. Furthermore, the extent to which government works in the interest of principals often extends only as far as will secure the continued patronage of the principal while ensuring government interests are protected.

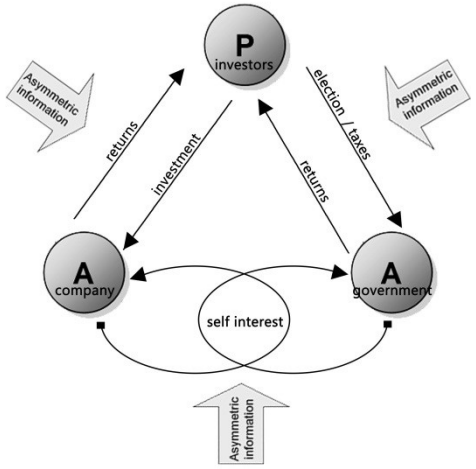
It is here that we are forced to diverge from a standard principle-agent problem and advance to a multi-agent problem. Often you see government or companies mentioned as the principal in an agency problem. In contrast this multi-agent problem displays both as agents of investors. It clearly demonstrates that information asymmetry, agency cost, and conflicting interests; assert their presence in the equation.

2.4 Multiple-Agency

Agency relationships often have significant information asymmetry. Such relationships are at their most asymmetric point when basic agency theory breaks down. Preferences are unknown or go unsatisfied, contracts are not formulated, incentives are not fashioned, monitoring goes un-mobilized, and sanctions are not levied (Shapiro, 2005). In regards to a regulating body, investors are often left with the SEC or other similar agencies, to ensure their protection and uphold their expectations. However, the investors do have some control of the legislators that govern the SEC and can thereby influence matters in that way. As far as the selection of their other agent in this scenario, investors always have their choice of which company to entrust their investment to. Ultimately a successful principal-agent relationship should decrease uncertainty and Agency Cost and adhere to the interests of the principal.

The difficulty that arises in a multiple-agent problem, especially in this example, is that agents often have competing interests. Companies are not necessarily eager, but are often willing to undertake actions, such as the adoption of IFRS. The potential increase in foreign investment is a significant incentive for them to do so. Companies do face the risk of increased taxation; however the benefits can potentially outweigh the drawbacks of open disclosure. An important variation point to note in the multi-agent model, is that unlike the standard agency model which has only one point of information asymmetry, the multi-agent model has no less than three points which drastically complicates any engagements between parties.

Figure 2.2: Multi-Agent Example

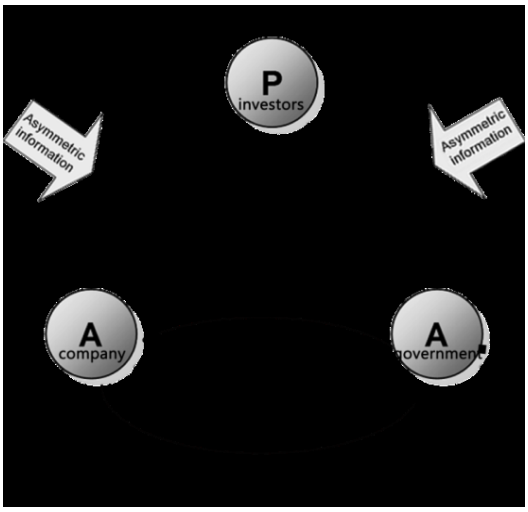


2.5 Modified Multiple-Agency

Agency relationships often have significant information asymmetry. Such relationships are at their most asymmetric point when basic agency theory breaks down. Preferences are unknown or go unsatisfied, contracts are not formulated, incentives are not fashioned, monitoring goes un-mobilized, and sanctions are not levied (Shapiro, 2005). In regards to a regulating body, investors are often left with the SEC or other similar agencies, to ensure their protection and uphold their expectations. However, the investors do have some control of the legislators that govern the SEC and can thereby influence matters in that way. As far as the selection of their other agent in this scenario, investors always have their choice of which company to entrust their investment to. Ultimately a successful principal-agent relationship should decrease uncertainty and Agency Cost and adhere to the interests of the principal.

The difficulty that arises in a multiple-agent problem, especially in this example, is that agents often have competing interests. Companies are not necessarily eager, but are often willing to undertake actions, such as the adoption of IFRS. The potential increase in foreign investment is a significant incentive for them to do so. Companies do face the risk of increased taxation in the future; however the benefits can potentially outweigh the drawbacks of open disclosure. Important to note is the reduced information asymmetry present

in a modified multi-agent model. As the interests of the state run enterprise and the state can general be said to coincide with one another's agenda.



2.6 Agency Costs

We can at this point, readily identify a clear example of the potential costs involved. The adoption of IFRS would require governments to give up considerable control of their sovereign taxation rights, potentially reducing their income tax receipts. This is a strong disincentive for the official adoption of IFRS over a country's established GAAP.

All agency relationships are encumbered by agency costs. Agency costs are defined as a type of internal cost that arises from, or must be paid to, an agent acting on behalf of a principal. Agency costs arise because of core problems such as conflicts of interest between shareholders and management. Shareholders wish for management to run the company in a way that increases shareholder value. But management may wish to grow the company in ways that increase their personal power and wealth and are not necessarily in the best interests of shareholders (Meckling, 1976). It is important to realize that there will always be divergence between an agent's decisions and those decisions which might benefit the welfare of the principal. This

residual loss should always be expected and cannot be completely eliminated outside of a theoretical perfect principal-agent relationship.

Various agency costs exist, however, for the purpose of this article we will limit our mention to adverse selection and moral hazard, both of which deal with market failure. Adverse Selection may be defined as: A phenomenon wherein the one party is confronted with the probability of loss due to unknown risk which were not factored in at the time of sale (Young, et al. 2011). Moral Hazard may be defined as: The risk that a party to a transaction has not entered into the contract in good faith, has provided misleading information about its assets, liabilities or credit capacity, or has an incentive to take unusual risks in a desperate attempt to earn a profit before the contract settles (Research and Guidance Committee, 2013).

For our purposes we can say that adverse selection occurs when a party, most commonly the agent, has better information than the other party, generally the principal, prior to the establishment of an agency relationship. This allows the party with the better information, in this case the agent, to act opportunistically prior to the establishment of any binding obligation. In an instance of moral hazard the party would act opportunistically after the establishment of a binding obligation. A simple example which demonstrates adverse selection would be investors receiving information procured by the SEC. Such information would have been procured through independent audit demonstrating that a firm was adhering to GAAP and disclosing accurate details related to sales, assets, and earnings. Bad firms sometimes slant their information to improve the outlook to investors which in turn causes adverse selection for investors. That money could have been invested in a better firm if the investors possessed more accurate information.

An example of moral hazard on the other hand, can be shown in the form of a firm selling stock under the guise of investing in valuable assets but instead using those funds to pay off retirement debt. Without strong safeguards in place for both parties to enforce obligations, there is the strong possibility for deceit and misappropriation.

Figure 2 demonstrates the complexity of introducing a second agent to a relationship. The areas in-between principals and agents are where asymmetric information lies. The lower half of the figure

demonstrates overlapping or competing interests between agents. Some examples of asymmetric information utilized in a multi-agent problem might be controversial legislation, or the leaking of information between agent and principal in regards to other agents (Shapiro, 2005).

2.7 Aligning Interests and Agent Remuneration

Where government involvement is concerned we are forced to consider the impact of International Financial Reporting Standards on tax revenues. Beyond tax revenue, governments do not have profits or monetary gains to distribute among public agencies or politicians for adhering to the interests of a principal. There are many metaphors which clearly demonstrate this fact. Politicians seek to obtain votes, bureaucrats need big budgets.

Policy commitments often undermine the expectation of goal conflict resolution between principals and agents (Shapiro, 2005). When dealing with political entities, remunerations are usually conferred in the form of reputation or sanction. Proof of the government interest in lost revenue can easily be seen in the current case being made against Caterpillar Inc. The US government is alleging that Caterpillar has deferred or avoided billions of dollars in tax liability over the past decade. This was accomplished by shifting profits from overseas replacement-part sales to a Swiss subsidiary (Hagerty, 2014).

Additionally the US government is currently scrutinizing Swiss banks participating in the U.S. Justice Department program and others outside of the program which have allegedly been hosting undeclared U.S. assets to help circumvent tax payments (Morse, 2014). Subsequently of interest is the fact that Switzerland began IFRS convergence in 2002 and full adoption in 2005, which includes IAS tax regulations for listed companies (Larson and Street, 2004).

2.8 Conflicting Interests: Simple Scenario

Recalling from our earlier mention that agents working for a principal often have varying or competing interests allows us to look more closely at figure two and acknowledge the potential for agency problems. The overlapping region at the bottom of figure two representing mutual interests between government and companies, the two primary agents mentioned in this article. These interests rarely align in a convenient manner. It is in the resolution of these competing interests that the strongest evidence of and most significant source of agency costs may be found. It is perhaps in the form of bureaucratic corruption that we can most clearly define this issue. Bureaucratic corruption can be defined as bureaucratic behavior that consciously deviates from the formal duties and accepted norms for private advantage (Gillespie, 2011). These actions may be found among both politicians and managers, however, for our purposes a simple example should suffice to see in what manner it applies.

A simple yet effective scenario may be crafted in relation to the adoption of International Financial Reporting Standards. Investors desire the use of International Standards to ensure that they are investing their funds in, what they believe to be, the best option, thus potentially alleviating agency costs and promoting a strong return on their investment. IFRS can be described as essentially "investor focused". The rationale underlying this investor focus is that if the financial information produced satisfies the needs of investors, it should also, by definition, meet most of the needs of other users of the financial statements (PriceWaterhouseCoopers2, 2011).

In the current environment, companies are often happy to comply because by providing these statements they help promote foreign investment into the company, thereby increasing capital. In instances where IFRS have been fully implemented there are various examples of government passed legislation guaranteeing there will be no increase in taxation. This is significant because some studies have revealed that the use of IFRS for a tax base in Italy would increase the base tax rate by nearly 11% (Marenzi, et al., 2013). Regardless of whether IFRS increases the tax base it is still likely that companies would adhere to investor interests to ensure access to investor capital.

Governments on the other hand are rarely as responsive to the acceptance of international standards due to beliefs that IFRS principles are too 'investor focused' to meet the requirements of taxpayers and tax authorities. It has been acknowledged that IFRS might be an appropriate place to design a common tax base (PriceWaterhouseCoopers3, 2008). The adoption of IFRS would require governments to waive considerable control of their sovereign taxation rights which is a considerable disincentive. Research performed in Australia has demonstrated that the application of IFRS in government reporting has shown a positive increase in both assets and liabilities (Manzurul and Kamran, 2012). It provides some evidence that suggests IFRS adoption would increase taxable assets for companies as well and thereby potentially increases tax revenues for the government. This same idea is reflected in the fore mentioned Italian study. If proven true, it would provide strong incentive for governments to adopt IFRS for various reasons. However, until it is proven, it is considered prudent to tote the status quo.

2.9 Agency and Bureaucracy

The scenario mentioned above provides a simplistic view of one agent working cohesively with the interests of the investor while the other does not. This scenario can become much more complex when one takes into consideration the method in which government legislation and politicians are influenced. It can be argued that government and bureaucrats cannot be considered as agents because they are not elected by any one individual and are not working for the interests of any select person, generally speaking. Though true it is also an erroneous view. Politicians are usually elected en masse by a collective of people to serve that single collective's various interests. Therefore it is vital to consider that though investors are the majority in electing officials to represent them, companies are also comprised of individuals with the same rights and privilege. Even companies themselves are now empowered with the ability to elect officials to represent their interests.

2.10 Corporate and Political Interest

Prior to 2010 the Taft-Hartley Act of 1947 prohibited labor unions and corporations from spending money to influence federal elections and prohibited unions from contributing to campaigns. However, the Citizens United V. Federal Election Commission ruling, in 2010, brought to power a new political action committee known as a Super PAC (Columbia University, 2009). These committees may not make contributions directly to political campaigns or candidates however so long as they remain independent they may engage in unlimited political spending, can raise funds from individuals, corporations, unions, and other groups without any legal limit. These Super PACS have continued to gain traction and receive large cash flows in which to help support candidates of their choice. Companies are slowly becoming strong contributors (The Wall Street Journal, 2014).

In the 2012 US primary elections Super PACS spent nearly 40 million supporting Mitt Romney (Cillizza and Blake, 2012). Nearly 16 million was used to support Newt Gingrich (Masso and Gold, 2012). Companies are able to use their inflows of investor capital to help fund their support of candidates. This is an important consideration since the candidate selection may not be in alignment with the investors own personal wishes and would not have been considered an acceptable use of funds by the investors. Additionally the development of the Super PACS gives significant power to foreign companies who through localized subsidiaries are able to engage in the sovereign political election process of a nation, which under other circumstances would be illegal.

2.11 Conclusion

Despite the various topics this article was forced to address, the existence of complex multi-agent relationships, between government entities, companies, and investors has been demonstrated. Though this relationship is not tangible and could not easily be demonstrated through calculus, it suggests a viable relationship that must be taken into consideration. Accounting standards are not solely based on the laws of a country but on the society as well. The essential background information provided the theories involved and

clarified their application in real world examples so that a plausible stance for assuming these agency relationships could be established and defended, thereby enabling future research to continue unimpeded. Though it must be acknowledged that the accounting systems in various countries differ, it should be sufficient to say that if such relationships can be identified in highly structured law and rule based societies such as the US, similar relationships exist in other law bound nations, and most certainly exist is less restrictive governments, thus permitting a base assumption that investors have an agency relationship with both companies and government.

2.12 Introduction and Literature Review

This section gives in-depth information which demonstrates the importance and influence of international financial reporting standards, and reviews studies which support the basis for the multi-agency model and the theoretical framework that is assumed when analyzing the effects of IFRS implementation on financial reporting information. This section serves to showcase supporting research in the three areas that comprise the multi-agent model, investment (investors), capital markets (companies) and economics and taxation (government). This chapter solidifies the underlying body of this study's hypothesis, and clarifies the need for a thorough understanding of the broad reaching affects IFRS will have on a global macroeconomic scale. Furthermore, the research is presented in such a way as to demonstrate the close-knit multi-agency relationship that is assumed throughout this thesis. The fact that IFRS generally results in positive benefits is often presented in research papers on the subject. It is generally accepted that using a unified set of accounting standards throughout the world has the potential to improve the comparability and transparency of financial information, thus alleviating risk for the investors. By decreasing this information asymmetry the majority of research suggests that higher quality accounting standards will stimulate capital markets and allow cash to flow easily between international capital markets. Through these actions, economies grow allowing the government to collect more taxes which can then be reinvested to improve infrastructure. The creation of infrastructure will result in more jobs and an improved outlook on economic growth which will

lead to yet further investment and self-reinforcing cycle. Whether the impact is positive or negative holds no bearing on this chapter except to reinforce the fact that IFRS are influential enough to impact economic conditions and investment opportunities.

2.13 IFRS and the USERS of Financial Information

This section of chapter 2 focuses on research centered around the relationship between investors and companies. Specifically it focuses on research involving investors and the financial information which they use to assess investment risk. It also takes a look at research involving the users of financial information such as financial analysts. One thing that should be readily identifiable through the literature review in this chapter is the relationship between the investor and company and or the relationship between the investor and government. The literature presented in the following sections presents examples which can be used to solidify the assumption of a multi-agent relationship and works as a precursor to the information, ideas and examples that will be presented in chapter 3.

(Khlif, et al., 2013) investigated the effect of IFRS on financial reporting. Specifically they focused on value relevance and earnings transparency in the form of financial discretionary accruals and capital market effects by way of looking at analyst earnings forecasts. Through analysis of factors such as value relevance for book value, equity and earnings they were able to quantitatively test the assertion made by standard setters and decision-makers. Their results demonstrated that book value of equity in earnings is statistically significant and is directly affected by legal origin and accounting and auditing enforcement as well as congruency between domestic GAAP and IFRS and the manner in which IFRS is implemented, i.e. adoption, convergence or harmonization. In total the results suggested that IFRS has practical value for investors researchers and standard setters (Khlif, et al., 2013).

A study conducted by (Welker, et al., 2011) sought to investigate how financial accounting harmonization affected one particular group of users, financial analysts. The study found that IFRS adoption attracts analysts from other countries which are simultaneously adopting IFRS as well as analyst from

countries with broad exposure to IFRS. According to this study IFRS adoption improves foreign analysts' forecasting accuracy. According to this study, the more extensively IFRS is implemented the better foreign analysts prediction becomes. Conversely though, the researchers state that local analyst forecasting accuracy is unaffected by IFRS adoption. This study suggests that there is no identifiable increase in forecasting accuracy for analysts from non-adopting countries. In summary their research provides evidence that widespread IFRS adoption increases the usefulness of accounting data for financial analysts and enhances the comparability of accounting data

In an attempt to identify corruption and political institutions and accounting environments (Monem and Houqe, 2013) investigated 166 countries over more than a decade to identify the role of accounting in reducing political corruption. The research goes against the common belief that those wishing to counter corruption should pursue higher quality accounting standards. By accessing investor protection and economic development data from the World Bank, they first analyzed whether or not a country was IFRS adopter; and then identified to what extent investors are protected by the disclosure of ownership and financial information. This is in keeping with the perceptions of this thesis, particularly in relation to corruption in China, Russia and Brazil where investor protections are often at the whim of a communist state, a political issue which may actually mislead or hinder the principals, i.e. the investors and financial data users, in the multi-agent relationship. Monem and Houqe's research finds that IFRS do little to combat corruption and countries with strong political institutions will likely benefit the most from IFRS adoption, results which hold even with the inclusion of the Hofstede Cultural Dimension.

(Leung, 2015) investigated the legal enforcement of legal protection mechanisms in Canada as a means of controlling earnings management. He questions whether or not in countries will well established legal systems and high quality accounting standards, significant benefits may be obtained through changing accounting methods. Leung identified that discretionary accruals improved, but Manage Earnings towards Target (METT) did not, nor did Timely Loss Recognition (Leung, 2015). Furthermore, he states that firms issuing high volume equities are motivated to associate with lower earnings quality. According to his

research, some firms are engaged in two distinct strategic directions (prospector vs. defender) both of which have systemically dissimilar effects on earnings quality in IFRS adoption. He summarizes his final point by stating IFRS adoption does indeed increase firm value, but the increase is achieved at the expense of lower accounting quality.

2.14 IFRS and FDI

So the fundamental question remains, do IFRS represent financial information to market participants in a way that is beneficial thereby making markets more efficient when financial data is used? We expected IFRS information provided by firms and market participants may differ significantly from information based on national GAAP. Due to differences between requirements of national standards and IFRS, the extent to which changes are judged is most readily be discerned is in the form of observable financial benefits within capital markets.

This section of chapter 2 focuses on the effects of voluntary IFRS implementation. It reviews research which demonstrates the impact of IFRS on adopters. Most research presented deals with the impact of IFRS in capital markets, i.e. giving the firm's access to foreign cash. This essentially demonstrates the relationship between the investors in the companies. Other literature focuses on the tax benefits that may be gained by shifting profits to and IFRS tax base jurisdiction, via transfer pricing, or the effects of accounting enforcement and earnings management. Both of these examples provide examples of the relationship between companies and government.

(Othman and Kossentini) explored decisions to adopt by looking at institutional and economic network theories. They focused on country level effects and institutional pressures of isomorphic change as well as economic network pressures. The research confirmed mimetic isomorphism strongly affects the level of IFRS adoption. By implementing these new standards higher quality information was provided thus establishing international legitimization and attracting foreign investment (Othman, H.B. and Kossentini, A.). In summary, they showed that in the global economic system, it is essential for standard setters and market

regulators to meet trade partner pressures by providing relevant financial information that is internationally recognized and respected.

(Gassen and Sellhorn, 2006) focused on three specific research questions; what are the determinants of voluntary IFRS adoption by publicly traded German firms, what differences exist in terms of earnings quality, and what information asymmetry exists between IFRS and HGB firms. The results suggested voluntary IFRS adoption is most greatly influenced by firm size international exposure and dispersion of ownership, i.e. investors. Their study showed that IFRS is extremely attractive to young companies seeking access to capital markets via IPOs. In regards to earnings quality the researchers determined that IFRS provides more persistent, less predictable and more conservative earnings leading them to determine that IFRS firms are of higher quality and experience less information asymmetry relative to HGB firms (Gassen and Sellhorn, 2006). As for earnings quality, the implementation of IFRS does tend to induce higher volatility for stock shares, that is not to say that the quality is less but rather that more information can also cause uncertainty for investors.

(Hail, Luzi and Christian, 2007) undertook the task of identifying the effect of IFRS on capital market data. This collection of data would be very influential in considering a firm's degree of IFRS implementation. They sampled a collection of countries throughout the EU where IFRS is mandatory as well as samples from countries where adoption is not mandatory. Unlike other studies, Hail and Leuz's research did not yield significant structural changes leading them to the determination that IFRS reporting may be only marginally impacting.

(De Simone, 2015) questioned whether standardized accounting standards was a factor in tax-motivated incoming shifting among multinational companies, a topic addressed in later chapters within this thesis when referencing transfer pricing. De Simone's results provided evidence of a link between financial accounting and tax planning, suggesting that a unifying accounting standard, such as IFRS, across jurisdictions increases the flexibility of MNEs to shift income. This kind of flexibility provides lucrative opportunities for firm decision makers and tax planners; however it has significant risk as well. This kind of

action is in direct conflict to the individual goals of the government entity of the multi-agent model, which is why so many multinational corporations such as Starbucks, Caterpillar and Google are currently ensnared in legal proceedings for similar issues which are touched on in later chapters of this thesis.

(Vogler, 2011) delved into the consequences of accounting enforcement in Germany. Specifically there were investigating whether the objective of consistent and faithful application of accounting standards was taking place. As might be expected the findings suggested that the higher the level of enforcement the less errors would be present. Additionally Vogler, O., et al. provided evidence that earnings quality, stock liquidity, and, to a limited extent, the market valuation of companies has been positively affected. This research team conducted their testing under various systems with only slightly varied results, indicating somewhat conclusively for them, that higher enforcement yields better earnings management.

2.15 IFRS and Economic Management

the final section involves literature that discuss the determinants of IFRS adoption within a jurisdiction, the impact of accounting harmonization across borders, as well as the effect of IFRS adoption on income tax. Both of these demonstrate the relationship between government and corporations and to some extent general investors. Though not specifically covered in this literature review, it's also important to remember that the government issues debt securities, which mean government, would be affected by IFRS implementation when acting in the marketplace, albeit at the level of government investors not individual investors. Both taxation and securities fall into the realm of self-interest which may lead the government to work against their principals or constituencies. The multi-agency relationship becomes even more complex and mired if you consider nation states which operate as communist regimes full of corruption, such as mentioned in the first section of chapter two. This will be covered in greater detail in chapter three as we look specifically at Russia and China which true investor protections can't be assumed. Most of the literature reviewed in this section however works to help reinforce the existence of the multi-agent relationship and the validity of my points.

The work of (Tarca, 2012) perhaps more than any other researcher, helps to support the topics presented in this thesis. While not one of the initial resources when researching this topic, overlap eventually brought her research to the forefront. Tarca, an academic fellow researcher at the IFRS institute, undertook an extensive empirical analysis of the arguments for accounting standardization, via IFRS implementation and provided a thorough summary appropriate for this paper. Among Tarca's primary determinations was that IFRS improve efficiency in capital markets, and promote cross border trade. In looking at the infrastructure that supports IFRS, the researcher states that capacity and institutional incentives are key to successful implementation. Furthermore, a strong framework that encompasses legal protection, adequate monitoring and knowledgeable representation is vital. Of interest is the fact that Tarca identifies that whereas IFRS benefits can easily be presented for firms in developing countries, and developed nations the benefits tend to be for the market or nation as a whole. As a result, the benefits to firms may vary significantly at the national level. Tarca also suggests that global benefits from the use of IFRS are beginning to emerge. This study not only coincides with the topics in this paper but unwittingly presents data in a manner which clearly presents the existence of a multi-agency relationship through the deep interconnectedness of the investors, companies and government.

The research of (Holthausen, 2008) studied the impact of accounting standards on financial reporting outcomes. By analyzing recent legal literature identified that measures of both public enforcement and private enforcement are closely correlated with capital market outcomes and therefore enforcement has a significant effect on how adoption affects financial reporting, so much so that enforcement varies widely across countries and regions. Holthausen poses the question as to whether or not regulators will offer their own interpretations and guidance on IFRS which will in turn influence differences in the standards across countries. In short he makes clear that, financial reporting is an endogenous outcome of political and market forces within a country.

The determinants for the adoption of IFRS in developing countries were researched by (Zehri and Chouaibi, 2013). Their objective was to identify the factors that clarify the choice to apply IFRS in developing countries. They sampled 74 developing countries and their empirical results showed the highest tendency towards adoption came from countries experiencing high economic growth, utilizing a legal system of common-law and possessing an advanced education system (tertiary education). Other factors that were analyzed included culture, the existence of capital markets, the political system and how globalized the country. However, they ultimately determined that the institutional environment and macroeconomic data for the primary influences on IFRS adoption in developing countries. These results support other research that suggests the driving factors behind IFRS adoption differs between developing and developed countries

(De George, 2013) thoroughly examined the impact of accounting harmonization on cross-border capital markets. The study included approximate 14,000 firms from more than 35 countries with data spanning a decade. De George carefully controlled for common macro-economic exposures and bilateral trade in order to identify incidences of extreme negative market returns cost to local non-adopting countries as a result of cross-border IFRS adopter interactions. The researcher demonstrated that volatility of liquidity shocks, beyond what economic expectations. De George's research indicates that liquidity shocks that originate from cross border countries inevitably magnify in intensity as they reach local markets. De George states that while prior studies have shown the common benefits of IFRS adoption in broadening access to foreign capital through comparability, familiarity and reductions in information asymmetry, the increased foreign investment opens up domestic markets to the threat of cross-border contagion, (De George, 2013) . This impact, which De George suggests can outweigh the benefits provided by IFRS adoption, is something substantial for standard setters and decision-makers within IFRS adopting jurisdiction to consider.

(Wendt, et al., 2005) inspected the influence between financial and tax accounting following the integration of mandatory IFRS implementation in 2002. Wendt, et al. allude to the fact that compared GAAP advance of IFRS as a tax base derives from the creation of a common use tax system in the EU. That said, not all IFRS standards were adopted for the purposes of taxation. Wendt, C., et al. points out that only those

standards convenient for taxation purposes and applicable under the realization principal were adopted for taxation purposes. Wendt, C., et al. states unequivocally that utilizing a common tax base will help reduce compliance costs which stem from 25 different tax bases throughout the EU (Wendt, C., et al., 2005). The researchers identify such points as depreciation, evaluation of inventories, and provisions for liabilities has some of the deduction expenses that would be affected. However, as they point out, the nominal tax rate is the most significant and these considerable dispersions of tax burden would not alter significantly. They postulate that simply harmonizing tax accounting rules cannot alleviate the differences in corporate tax burden. Such results would require a reduction in the nominal tax rate while leaving the effective tax burdens unchanged.

CHAPTER 3: THE CONNECTION BETWEEN IFRS and FINANCIAL INDICATORS

This section expresses the importance of IFRS as a tool for equalizing information for Foreign Direct Investment (FDI). It also highlights the importance of financial ratios and GDP as economic indicators for FDI and discusses the manner in which IFRS implementation will have a rolling affect which shifts both indicators and will directly impact investment decisions from foreign entities.

3.1 Introduction

The primary purpose of International Financial Reporting Standards (IFRS) is as a means of reducing information asymmetry, reducing home country bias and thereby enhancing the appeal for foreign investors. With that in mind, simply attaching the label of IFRS is insufficient to procure foreign investors. The research of Hansen *et al*., shows a strong correlation between company transparency and foreign investment and further demonstrates that IFRS adoption can mitigate the extent of home bias when applied rigorously (Hansen *et al.*, 2013**)**.

The objective of financial statements is to provide information, about the financial position, performance, and changes in financial position of an entity, that is useful to a wide range of users in making economic and investment decisions (KMPG, 2010). The use of IFRS has the potential to reduce earnings manipulation and improve stock market efficiency. According to recent research, there is no question that IFRS adoption provides various benefits by enhancing comparability of financial statements, lowering transaction costs, providing access to international capital, and increasing international investment (KMPG, 2010). Higher quality accounting and transparency enable investors to make informed decisions, as they attempt to predict the firm's future performance.

The information provided by annual reports is used for analysis and decision-making purposes. Due to variations among accounting methods, legal systems and cultures, the data is often presented in contrasting

ways that can be misleading when comparing financial data between companies. Despite this challenge, a wealth of information is provided in these reports which enable useful comparisons to be made. In comparing these reports it is essential to insure that the accounting practices do not differ to an extent that the comparisons are meaningless. Though the trend toward globalization continues to hold sway and the move towards a single set of standards looks ever closer, regional accounting will continue to play a notable role.

The relation between FDI and economic growth is frequently studied both theoretically and empirically. There are ongoing studies especially on the economic effects of FDI in developing countries. A consensus has not been developed yet regarding the results of analyses. Summary of some selected studies will be provided below.

Lynch (2007) examined the effect of IFRS adoption, relating to post-employment benefits and its effects on debt/equity ratios. The findings showed a significant increase in debt/equity ratios with three out of five Australian companies having an increase while nine out of ten UK companies had an increase in debt/equity ratios. Generally the increase in UK debt/equity ratios was of a greater magnitude than the Australian companies, which could be due to some of the older UK companies having significant pension funds.

Lantto and Sahlström (2009) undertook the job of proving that IFRS adoption affects key financial ratios. Their findings demonstrated a conclusive shift in key financial ratios as a direct result of the application of IFRS. The overall results indicate that the adoption of rules concerning fair value accounting, lease accounting and income tax accounting, as well as rules concerning the accounting of financial instruments, explain the changes in the key accounting ratios.

Blanchette *et al.* (2011) analyzed the impact of IFRS on financial ratios in Canada. They identified a fundamental difference between Canadian GAAP and IFRS, fair value accounting and consolidation. IFRS reliance on fair value accounting represents a substantial difference when compared with Canadian GAAP and as a result can lead to three possible effects on financial statements; balance sheet figures may be adjusted, some unrealized gains and losses will be directly allocated to the income statement, and other

unrealized gains and losses may not be represented on the income statement until realized through a transaction with a third party. As a result ratios such as liquidity and leverage ratios are affected, due to balance sheet variations, and profitability and coverage ratios, shift as a result of balance sheet variations and the recognition of unrealized gains and losses.

Chen *et al.* (2012) hypothesized that the convergence of domestic and International Financial Reporting Standards (IFRS) promoted FDI. Using bilateral FDI data from 30 OECD countries between 2000 and 2005 they applied a gravity model to their regression model. The results suggest that there is a strong correlation between the adoption of IFRS and FDI cash flows, largely associated with the degree of convergence. While acknowledging that controlling other determinants of FDI, in particular the rule of law, there are shortcomings to the study; it is still arguable that accounting standards represent a specific component of institutional infrastructure that is important for FDI.

Rakesh and Shilpa (2013) used the top 100 companies listed in the Bombay Stock Exchange between 2012 and 2013, the researchers queried business leaders and analyzed their findings using statistical analysis to determine whether or not a correlation existed between IFRS and adoption and implementation and FDI inflows into India. Their findings suggest definitively that IFRS adoption has indeed been a beneficial step for India and has led to increased FDI inflows.

Duo Qin *et al.* (2005) aimed to validate the long standing belief that China's key development strategy, investment-driven growth, is indeed responsible for the explosive growth within the Chinese economy. The analysis of the long-run GDP trend shows that the Chinese economy has experienced positive effect on economic growth as a direct result of cash inflows and accumulated capital.

Contessi and Weinberger (2009) looked for evidence of a positive relationship between foreign direct investment and national growth by looking at foreign direct investment, productivity, and growth using aggregate data. Their findings suggest that though the effect on GDP has been studied extensively and most literature suggests a positive correlation exists, in reality the evidence is too mixed and there is insufficient empirical evidence to lay claim one way or the other (Contessi and Weinberger, 2009, p.75).

Agrawal and Khan (2011) investigated the effect of FDI on GDP (economic growth) in China and India. Both countries have experienced economic growth in recent years. Through use of their modified growth model, they confirm that FDI promotes economic growth, and further provides an estimate that shows China is more significantly affected by FDI with a 1% increase in FDI yielding a 0.07% increase in China's GDP while India's experiences only a 0.02% increase in GDP. (Agrawal and Khan, 2011)

Dunne *et al.* (2008) closely examined the implementation of IFRS in three countries: the UK, Italy and Ireland. The study focuses on these three countries because it was expected that companies in countries with a similar national accounting environment, such as the UK and Ireland, would experience similar reporting changes following the adoption of IFRS, and that companies in countries with a very different reporting environment, legal system and culture, such as Italy, would be affected differently by the adoption of IFRS. It provides a very thorough evaluation (Dunne, *et al.*, 2008).

3.2 The effect of IFRS on Financial Ratios

IFRS, to the best of my knowledge, are not applied with the express intent of altering financial ratios. That does not however allow professionals the luxury of being ignorant to the impact these new IAS will have when implemented. The changes, often varied in nature, are of paramount importance not only for the managers who use them to help determine their strategy and course of action but for the investors and creditors as well who will in turn inject money into these enterprises. The fact that IFRS are far less rule based than traditional GAAPs allows a great deal of leeway in reporting and to some extent it provides a great deal of flexibility in the manner that data is displayed.

Various researchers have pondered these very ideas and spent extensive hours identifying significant factors and statistically checking their connections. Results from researchers such as Blanchette *et al.* (2011), Lynch (2007), and Lantto and Sahlström (2009) have indeed shown that the adjustments made when reporting under local GAAP, versus IFRS, tends to produce notable differences but given that each local accounting practice tends to have its own unique intricacies even these discrepancies are not uniform internationally.

For example, more than one financial ratio is affected when converting U.S. GAAP to IFRS. A few of the more notable variations that may occur include the current and quick ratios, due to the method of inventory utilized. Another example is the interest coverage ratio, since earnings before interest and taxes directly correlate with differences in the cost of goods sold.

Prior to IFRS changeover, regression analysis of Canadian GAAP and IFRS showed high volatility between the two regimes due largely to differences in the application of fair value accounting. There were significant differences in the values of ratios such as current and quick ratios, debt, alternative-debt and equity ratios, interest coverage, fixed-charge and cash-flow coverage, return on assets (ROA), comprehensive-ROA and price-earnings related ratios (Blanchette *et al*., 2011)

The thorough research of Lynch (2007) identified a strong list of some of the most potentially impacting IFRS for the UK, several of which will greatly impact other developed nations similarly. Some of the most noted examples are listed below.

Significant IFRS

IFRS 2 – *Share-based payments*

IAS 12 – Income Taxes

IAS 39 – *Financial Instruments: recognition and measurement*,

IAS 16 – *Property, plant and equipment*

IFRS 3 – *Business combinations*

IAS 38 – *Intangible assets*

These International Accounting Standards are likely to have a significant impact on financial ratios following a conversion to IFRS. A simple example might be an instance of goodwill which is capitalized as an Intangible asset and as such is annually amortized. However, under IFRS capitalization annual impairment

review is required. This example and other issues related to IFRS are described in more detail within the paper by Blanchette *et al.*, (2007)

Within the UK, the following examples were of significant note in viewing the impact of IFRS. Important Varying Examples that will affect financial statements and ratios include:

IAS 12 which contrasts with FRS 19 in the UK it requires provisions be made for deferred tax on property revaluations31. This in general, may negatively affect balance sheets by increasing liabilities following the switch to IFRS. A company's total tax charge would increase, which ultimately would decrease the income calculated under IAS 12. Additionally, IAS 12 does not allow for the discontinuing of deferred tax. FRS 19 permits, but does not require, discontinuing of deferred tax. Finally, IAS 12 requires a reconciliation of the total (current and deferred) taxes. FRS 19 requires the reconciliation be carried out for the current tax charge only. IAS 12 is likely to negatively impact the financial statements of UK-listed companies by increasing total tax charges, thus reducing total profit (PwC, 2015)

IFRS may produce some changes due mainly to differences in valuation policy. In this case, balance sheet figures (equity) and eventually the income statement (due to the balance between revaluation surplus and loss) might be affected under IFRS 3 goodwill amortization is prohibited, whereas FRS 10 permits goodwill amortization if the useful economic life of the purchased goodwill is less than 20 years. IFRS 3 requires annual impairment tests, whereas FRS 10 requires annual impairment tests on goodwill if the useful economic life of the goodwill is more than 20 years. That is why, it is expected that in most cases, intangible assets will increase after transitioning to IFRS (increase in balance sheet figures) and that income statement figures (generally profit) will decrease due to impairment. This kind of data is of paramount importance to the managers, investors and creditors especially as it provides the base form of information which allows these parties to engage in FDI.

3.3 The Effect of IFRS on FDI

This topic is not necessarily difficult to understand however it is a many facetted issue clouded by various factors such as tax jurisdiction etc. The impact of IFRS on ratios, as mentioned in the preceding section is the basic information available to would be foreign investors, therefore having a true and accurate set of data that can be relied upon is crucial for FDI to proceed. But the impact of IFRS and ratios extends beyond the secondary affect caused by ratio adjustment. Researchers such as Chen *et al.*(2010), Rakesh and Shilpa (2009) and various others have performed statistical testing and regression modeling to provide their own bits of proof that IFRS has or does indeed affect FDI inflows.

Given that IFRS is specifically investor focused it stands to reason that if investors are more readily able to understand a company's reporting and financial position then they will be far more inclined to risk their private funds in promoting a business in the hope of good returns. It is not all that remarkable that statistical results should confirm this though it is important to note that such modeling is imperfect and cannot adequately cover all of the eventualities or possibilities which influence FDI. Therefore, these results are par at best and unremarkable beyond their ability to confirm the general consensus of accounting professionals, that being that IFRS increase investor knowledge and help encourage FDI cash flows.

Perhaps the most remarkable and notable way to observe the benefits of IFRS in regards to FDI would be to look at truly developing nations such as Nigeria. The research of Okpala (2012) which demonstrates that the primary loss involved in adopting an international standard set is the lost gains that might have accrued from future innovations in localized accounting standards (Okpala, 2012, p.77). Sacrificing the domestic accounting rules, rules which often varied from city to city, in favor of a standardized international set, has resulted in massive, uncharacteristic FDI inflows strongly demonstrating the benefits of a single standardized rule set, especially in developing nations.

3.4 The Effect of IFRS on GDP

It is at this point that the fore mentioned components, financial ratios and foreign direct investment, really come together and the broader and much more significant impact of IFRS comes into view. IFRS, as a standardized tool, allow investors to reach across borders and enhance their understanding of a company's financial position. Furthermore they gain immense freedom from the comparability provides inestimable benefits on all sides of the equation; however, it has only ever been a means to an end. The end of course being to enable consumers to have some fair understanding of the company they decide to put their money in and for the companies to take advantage of the large untapped segment of global financing available.

Once we arrive at this point, there is far more to consider than the simple matter of investing or not investing. As stated from the start, for IFRS to succeed it must prove beneficial to all parties involved. While it has been seen that it provides great benefits to the managers, investors and creditors, the largest and perhaps most vital member in the multi-agency relationship, government, would seem to be in a much less fortuitous position. There have been cases such as those researched by Agrawal and Khan (2011) and Contessi and Weinberger (2009) which clearly demonstrated GDP growth as a direct result of FDI which in turn can be attributed to the implementation of IFRS, however, a reverse scenario with far less positive results often occurs as well.

As we delve into this idea it becomes pertinent to first give a brief breakdown of how GDP is roughly calculated so that the following concepts may follow a logical course for you the reader. GDP at its simplest definition is a measure of all the goods and services produced domestically. Therefore, it can be roughly calculated by adding together the various components of the economy that are a measure of all the goods and services produced.

Basic GDP calculation formula: **Y = C + I + E + G**

Y = GDP

The sum of all the goods and services produced domestically.

C = Consumer Spending

Many of the goods and services produced are purchased by consumers. So, what consumers spend on them (C) is a measure of that component.

I = Investment made by industry

When calculating GDP, *investment* does NOT mean what we would normally classify investment as. It does not mean buying stocks and bonds or putting money in a savings account. When calculating GDP, *investment* refers to investment into new productive facilities, equipment, or processes which produce. Essentially we mean, buying goods and services that will produce more goods and services.

E = Excess of Exports over Imports

This can be summarized as the difference between the value of all exports and the value of all imports. If Exports exceeds imports, it contributes to the GDP. If not, it shrinks the GDP. Thus, even if a nation's people work very hard to produce products for exports, but still import more than they export, the nation's GDP will be negatively impacted. This is one of the reasons trade deficits are frequently a political target

G = Government Spending

The government buys (with your tax money) goods and services (G). These purchases are a measure of those goods and services produced. Be aware that many people make the mistake of thinking that the money paid in taxes and spent by the government is "lost" and therefore subtracts from the GDP. Tax money may indeed be spent inefficiently but this fact has no bearing on the calculation of the GDP.

This formula is relatively straightforward since GDP is a measure of all the goods and services produced domestically. In recent years, the value of GDP as a statistical figure has been challenged. It has been stated that it is a 1950's term that was designed for a period of time in which most goods were produced and consumed domestically and high barriers to trade existed. Under those circumstances the more narrow view

GDP offers was ideal for measuring input and output. Modern economists challenge this number stating one simple output does not measure the health of an economy. In their view it excludes various social data and is not an ideal measure to use in our global environment. Whereas these assumptions may be valid to some degree, for the purpose in which I utilize GDP, it still retains a position as the perfect statistical figure for the task at hand. The GDP flow diagram shown in figure 3.1 depicts a visual representation of the various components that comprise this formula and their contribution to GDP.

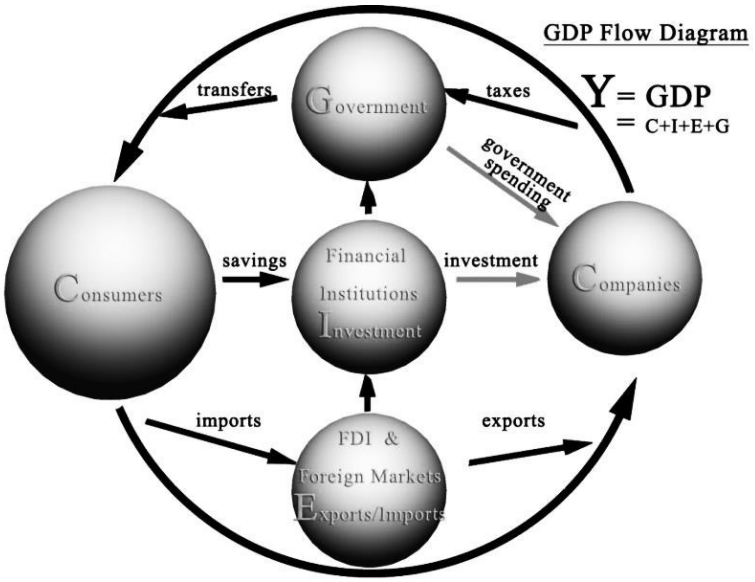


Figure 3.1: GDP Flow Diagram

As we take look at the accounting ramifications of IFRS we are not interested in the social concerns, but the cold hard math involved in company reporting. We are looking at figures compiled by way of a

formula, generally a localized GAAP. The application of IFRS then proposes to change the formula, or more specifically we might say make adjustments to the order of operations and the necessary steps to complete them. With this type of hard data analysis in mind, GDP remains the ideal statistical figure to measure some of the affects IFRS implementation may have on an economy in a macro-economic environment.

It is important to remember that most governments are funded by way of taxes. Anything that has the power to upset tax revenues has the power to interfere with an entire nation. If the global society were to adopt IFRS as the global standard, including as a tax base, it would no doubt be such a force. However, IFRS have managed to exert influence even without full global acceptance.

IFRS have managed to do this in two substantial ways. First by simplifying accounting and making it easier for laymen to understand, the flood gates have been cast open allowing money and investment revenues to stream out of countries and into a global tertiary system. Those funds now make their way throughout the world. In most cases, the government is still able to reap revenue from these funds as many investors use accounts which are based within their home countries to receive their own earnings. In some cases where less straight forward investors have seen fit to deprive governments of their "fair share", laws such as the U.S. FACTA law, which requires all foreign banking institutions to report American account holders, their balances and their transaction history, have come into play making it possible for governments to repatriate some of these funds.

The second is actually a bit more obscure. Some of the most popular tax havens for OECD countries are IFRS compliant countries such as Switzerland, the Netherlands and Ireland. Bermuda also is categorized as one of the favored tax havens; however, it does not conform to any specific accounting regime, including IFRS. To take advantage of these tax havens companies often using "transfer cost" also known as transfer pricing. Transfer pricing occurs anytime two companies that are part of the same multination group trade with each other in the form of say a parent company trading with a subsidiary. In itself, transfer pricing is neither illegal nor abusive. This only becomes the case when transfer mispricing occurs. One example of

trade mispricing can be seen in the form of re-invoicing. It is estimated, by various sources that somewhere between 60-70% of international trade actually occur internally within multinational companies. Though governments cannot adequately calculate the tax revenue losses, it is estimated that hundreds of billions of dollars are lost annually to this practice. Some estimates have reached as high as a trillion dollars in the estimated losses.

There are currently a number of high profile multi-billion dollar tax evasion cases circulating in the news. Take for example the case of Caterpillar Inc.'s transfer pricing arrangement in Switzerland, where the US government is currently pursuing 4.6 billion dollars in tax revenue. Three major cases with Google, Amazon and Starbucks are currently being pursued in the UK. All three of these companies earn an outrageous profit in the UK and yet in 2011, Google's UK unit paid just £6 million in taxes. Amazon, which had sales in the UK of £3.35 billion, paid only £1.8 million. Finally, Starbucks had £400m in sales and paid no corporate taxes (Barford and Holt, 2013). Instead Starbucks transferred some money to a Dutch sister company in royalty payments, bought coffee beans from Switzerland and paid high interest rates to borrow from other parts of the business. Now, in technicality, all of their actions could be upheld as legal, but the opinion of the government and the public is fast swinging away from that possibility.

In pulling all of these concepts together, we can identify where IFRS has been used in tax haven countries to help create an ideal environment for practices such as transfer pricing thereby allowing companies to reap hundreds of billions of dollars in profit while paying little in tax through the practice of transfer pricing. In connecting this to GDP, remember our basic formula, **Y = C + I + E + G.** Government (G) is funded through tax revenue. If hundreds of billions of tax revenue dollars are lost, then government spending power will shrink. Therefore the government will not be able to reinvest tax funds into the economy, will be unable to employ extra workers, will have insufficient funds to enhance infrastructure and will ultimately see a decline in GDP. When and if all countries were to adopt IFRS as their national GAAP and tax base, then this problem could quickly be remedied, however, that is a very unlikely scenario as it would require quick actions and anonymous agreement on an unprecedented international scale.

3.5 Conclusion

This article set forth with the intention of demonstrating significant relationships between IFRS and key investment indicators such as financial ratios, FDI and ultimately GDP. In reviewing the research of Blanchette *et al* . (2011), Lynch (2007), and Lantto and Sahlström (2009), there is a clear, albeit varied, correlation between financial ratios when shifting from GAAP to IFRS. Additionally the area devoted to FDI and the research performed by Contessi and Weinberger (2009) and Agrawal and Khan (2011) made sound statistical analysis which solidified the relationship between IFRS adoption and FDI investment. It is important to remember that their research is limited in that it doesn't analyze other potential factors that might have caused increases to FDI. As the final section relating to IFRS and GDP unfolded, it presented a layered relationship between these factors and IFRS. A clear and valid relationship between, IFRS, FDI, and financial ratios as well as their ability to impact national GDP could be reasonably identified. Understanding this relationship and the connections of the various economic indicators will undoubtedly assist in developing and analyzing future conjectures related to the impact IFRS can or will have on current users and future adopters, as well as their economies, under full IFRS implementation.

CHAPTER 4: IFRS IN A GLOBAL ECONOMY: ASIA

4.1 THE IMPACT OF IFRS IN A GLOBAL ECONOMY: JAPANESE CASE

4.11 Introduction to Japan

Since the end of WWII, Japan has continued to undergo significant social changes as it transitioned to a democratic common law country. The development of formal and informal institutions, customs, traditions norms, and religion overwhelmingly evolve form society as a whole. Culture and cultural values are not static (Williamson, 1998). Since the atrocities of WWII Japanese society has developed a mindset bent on preventing any repeat of history from occurring and as a result is now ranked among the highest countries in the world for uncertainty avoidance and risk averseness. As with many statutory rules within the country, authority and enforcement of accounting rules, in regards to measurement, disclosure, authority and enforcement can be classified by statutory control as oppose to professionalism. More simply stated, the government issues the rules that should be followed and how they should be observed as oppose to relying on adopted professional standards. The Japanese regulatory systems can be most readily characterized as legalistic even in regards to uniform accounting standards. As the country reshaped itself, larger equity markets developed and opened up. Like most countries, the global expansion of international companies and their activities forced the country to reevaluate its accounting practices and several situations have stimulated further evolution over the last several decades.

One major driving force behind these changes was due to the instability of economic markets following the fall of the Soviet Union in 1992. This presented Japan with an opportunity to transition from a planned economy, a direction still being pursued currently. The Japanese economic crisis which nearly crippled the banking system provided the necessary stimuli to implement effective change. These changes led to the establishment of a more modernized and effective system, which stabilized the economy and developed the financial investment markets and heavy inflows of foreign direct investment.

As is generally the case, with the increase in cross border transactions and the inflow of funds came the demand for transparency and quality accounting data. This further stimulated development of the accounting system as the traditionally secretive closed-door relationships between banks and companies were forced to open up to investor speculation. This can perhaps be attributed to the fact that many Japanese companies operate in the European market. Following Europe's implementation of IFRS standards, Japanese companies found themselves under heavy scrutiny. Internationally speaking, Japanese GAAP was not considered equivalent to the IFRS standards, as a result foreign investment into Japanese companies was threatened and Japanese regulators were forced to reassess the system Japanese accounting system again.

Japan has not elected to adopt IFRS, the path to convergence has been elected as the acceptable alternative. There have been significant challenges with the convergence of IFRS and considerable resistance from some Japanese companies, significant progress has been made and at present Japanese GAAP is generally accepted as equivalent or comparable to IFRS and US GAAP, however, the evolution of Japanese accounting remains fluid and more changes are both necessary and inevitable.

4.12 Historic Accounting in Japan

first and foremost, an understanding of Japanese accounting requires an understanding of traditional corporate structure and corporate funding. Until about 1950, Japanese corporations operated as Zaibatsus, with a singular holding company placed centrally, which in turn owned the majority of shares in other companies. Zaibatsu were generally financed by a single bank. The banks therefore controlled shares within other companies of the Zaibatsu. Zaibatsu had extremely secretive and closed workings and there was virtually no incentive to provide accessible financial information for public use (Schneider, et al., 2012).

The existence of Zaibatsu persisted until there were forced to dissolve following WWII. With this dissolution came the creation of a similar structure, known as Keiretsu. Keiretsu are comprised of

horizontally integrated companies from various industries that control shares within their horizontal group. These "parnets" often support each other vertically as well. This structure has proved very effective in protecting Japanese industry from hostile business practices because all parties involved within the keiretsu have shared relationships and goals. Like the Zaibatsu, the Keiretsu are also generally centralized around a single bank and as such, this system provides few incentives for creating useful financial reports for external use. It is important to note that these systems are still in place to some degree currently (Schneider, et al., 2012).

Japanese accounting principles have traditionally been strongly influenced by legal institutions and therefore operated under the strong influence of the conservatism principal, which is also in keeping with the social norm of bring risk averse. Prior to the year 2000, Japanese corporations were primarily funded by Japanese banks and the need for investor focused financial statements was not essential. There existed a closely linked triangular legal system responsible for regulating financial reporting in Japan. The three elements of the triangular legal system are as follows; the commercial code which was enacted in 1890, the Corporation tax law which was implemented in 1947 and the securities and exchange act which took effect in 1948 (Schneider, et al., 2012). In short the commercial code regulated financial reporting for all companies with requirements determined by the organizations size. The securities and exchange act, which was considered consistent with the commercial code, required stock listed companies to file consolidated parent only financial statements with regulators semiannually. The Corporation tax law enforced the rule of conservatism upon financial disclosures, i.e. reporting earnings instead of income in fair value (Citation; Schneider et al., 2012).

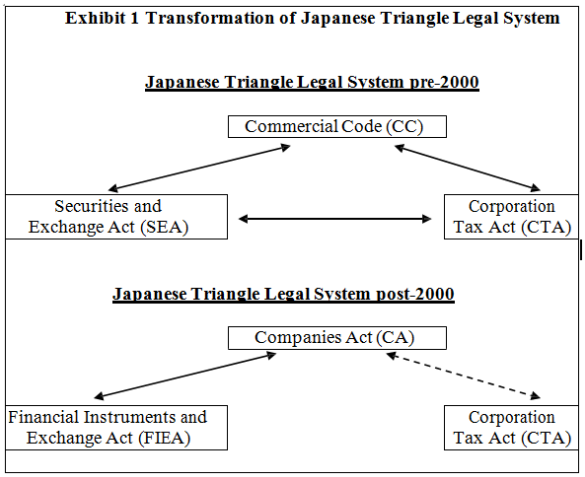


Figure 4.11: Pre and post 2000 Triangular Legal System

In the post 2000 period, many changes took place among the standard setting bodies of Japan in an effort to spur the economic recover of the nation and pave the way for a harmonized accounting system. In 2001, the accounting standards Board of Japan (ASBJ) was formed to develop domestic accounting standards and with the hope that it would also engage in contribute to international harmonization (citation).

Many changes to the Japanese system followed this. The Securities and Exchange act was amended to the Financial Instruments and Exchange Act (FIEA) in 2006 ultimately taking effect as the new disclosure ruleset for companies as of 2008 (JICPA, 2012). The Companies Act (CA), which replaced the former Commercial Code (CC) in 2005, eased regulations on businesses allowing much greater freedom to companies in business decisions and financial reporting, though it is widely believed that this has opened up many companies to a wide range of scandals and eroded investor trust in corporate management.

4.13 IFRS Accounting in Japan

The adoption of IFRS by the European Union and the pending adoption by the United States signify the global relevance of IFRS and the belief in the universal benefit of a single set of accounting standards. As the third largest economy in the world, globalization has necessitated that Japan harmonize its accounting standards. Japan's active participation in the development and implementation of IFRS is essential for the global acceptance and success of the IFRS initiative.

In conjunction with the other changes taking place within the Japanese triangular legal system, the afore mentioned ASBJ was formed in the private sector to develop domestic accounting standards and is contribute to international accounting standard harmonization or convergence. In 2002, ASBJ adjusted the regulation regarding acknowledgement of financial statements to be in accordance with the U.S. GAAP. And In 2004 ASBJ joined the convergence project with IASB to converge Japanese and European accounting standards with IFRSs (Citation - JICPA ; Saitou, 2007).

With the fore mentioned changes, market changes ensued. Beginning in 2006, investment by Japanese corporate entities and financial institutions started to decline and the shift resulted in foreign investors as the dominate shareholders, a problematic situation given Japan's history of poor disclosure (Citation – Taki).

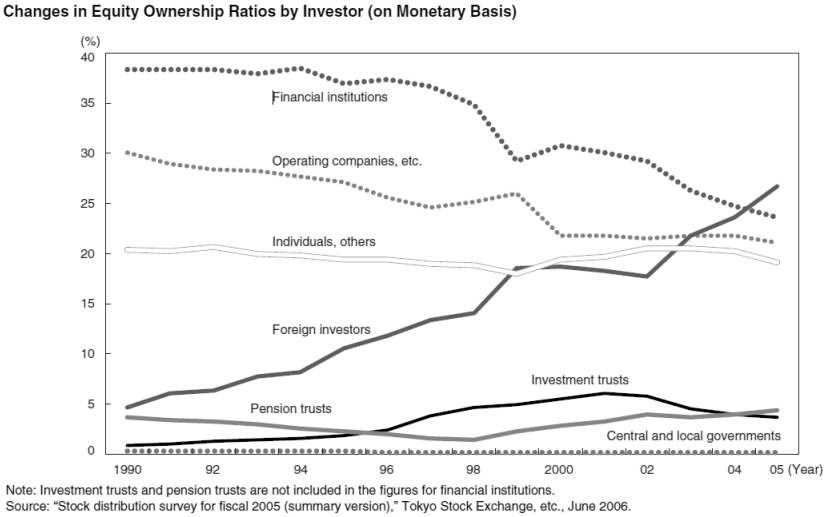


Figure 4.12: Taki Graph

There are various areas of contention, but as Japan is primarily a manufacturing concern, some of the most significant IFRS issues are noted within these industries. While it is important to note that IFRS are not generally shunned and somewhat well received, there is strong belief that some IFRS are inappropriate, inferior, or should be left out altogether. Examples include the following.

- Intangible assets: J-GAAP requires scheduled amortization and impairment procedures while IFRS relies solely on impairment procedures.
- Recycling: J-GAAP requires unrealized income be recycled to realized income to calculate comprehensive income and net income. IFRS doesn't always apply recycling for items such as financial instruments and defined benefit plans.
- Development expenditures: J-GAAP recognizes them as costs immediately and as research expenditures in principal. IFRS require some of these items to be recognized on the balance sheet.

- Retirement benefits: Japanese GAAP requires amortizing actuarial gains and losses over the average length of remaining service and recognizing them as part of the net income while, IFRS recognized them as other comprehensive income immediately.

4.14 Reporting Quality in Japan

As the accounting standards of Japan have been ruled equivalent to IFRS, it can be generally accepted that the reporting quality is of a high standard (JICPA, 2012). There is further research which helps support this fact. For example the research of Biddle and Hilary (2006) and Beatty et al. (2008) demonstrated that investment efficiency in bank-centered economies is not affected by accounting quality due to the fact that in bank-centered economies, the strength of the relationship between the bank and the company acts as a quality indicator. The research of Baik et al. who focused their research specifically in Japan, built upon the aforementioned research. Their results supported the findings of the other researchers. Specifically they found that the impact of accounting quality on investment was mitigated by the firm bank relationships presented within keiretsu. In short their findings showed evidence that bank relationships substitute for the transparency of financial statements and or are an improvisation on investment efficiency within bank centered economies, such as Japan.

4.15 Reporting Reliability in Japan

Even though the potential for significant information asymmetry still exists due to institutional relationships such as keiretsu and despite major accounting scandals in recent years such as the Toshiba debacle, the convergence of Japanese accounting standards with IFRS has generally increased reliability and the attractiveness of Japanese markets. Further increases in foreign investor shareholding will likely trigger more open reporting to sustain access to foreign capital thereby eroding the poor disclosure that has historically

prevailed in Japan. Furthermore, Japan is subject to a number measures which should ideally enhance the reliability of statutory filings such as the requirement that fiscal information be subjected to effective independent audits as well as various other statutory stipulations.

4.16 Reporting Transparency in Japan

The primary conditions which influence the transparency of Japanese accounting have already been alluded to in previous sections. In short, Japan has traditionally opted for minimal disclosure which was generally acceptable when operating solely in a keiretsu environment. However, as Japanese markets of open up to foreign investment more accurate and timely disclosures have become necessary. The research of Suda and Takada (2011), which deals with asymmetric timeliness, directly supports these ideas. In their findings, they state that during periods of high institutional ownership significant information asymmetry import timeliness exists. Conversely, the more closely the investors and company are associated the less asymmetry exists as information is presented in a timelier manner. Additionally, in periods when litigation is unlikely or during periods of regulation change asymmetry tends to be more significant and less timely (Suda and Takada, 2011).

4.17 Multi-Agency in Japan

The information detailed in previous sections qualifies this is another candidate for basic multiagency. As has been mentioned repeatedly, researchers consistently identify government, companies and society as the primary actors involved in accounting regulation, development and implementation. In the case of Japan the principle, i.e. the investors, desire accurate and timely information. The first agent, the corporation either eliminates asymmetry by providing information in a timely manner or in the case of a keiretsu, exploits information asymmetry by willfully delaying timely data, if at all, thereby working for their own interest.

Then of course, we're presented with the second agent, government which suspends regulation and limitation on corporations to achieve buy-in and cooperation, clearly demonstrating an example of mutual self-interest with corporations, while at the same time seeking to improve investor perceptions and increase foreign FDI inflows from foreign stockholders and spur economic growth. This demonstrates a fairly standard example of a democratic market economy and the balance these three participants try to maintain.

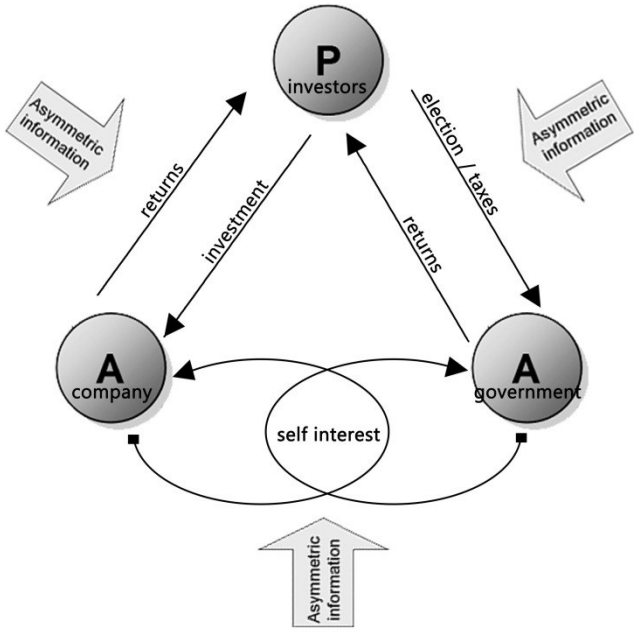


Figure 4.13: Multi-Agency Model for Japan

4.18 Game Theory, Moral Hazard and Asymmetric Risk in Japan

Historically speaking, Japan is no stranger to game theory. The extent to which such events have unraveled in modern history have demonstrated Japan's ability to engage in Game theory under various circumstances, however, given Japan's high level of risk averseness and uncertainty avoidance hostile game theory is not necessarily the issue of greatest significance.

In the case of Japan, the convergence of Japanese accounting standards with IFRS has made serious inroads into harmonizing accounting standards. The amount of asymmetric risk facing investors is significantly lower than faced in past years. That said, the existence of some keiretsu persists today. The less dependent a corporation is on financial support from the stock exchanges, the less likely it is to be forthcoming with its sensitive financial data.

4.19 Summary of Japan

While it is true that Japan is not fully adopt IFRS and significant differences in challenges still exist for the full convergence of the two standards, the implementation of IFRS equivalent standards has been fairly received and implemented in an honest fashion. Japan's acceptance of converged IFRS standards came during a period of economic strife and was clearly intended as a means of influencing inflows of foreign by developing domestic markets and making them more appealing to foreign investment. In Japan's desire to access financial capital has loosened the relationships of its traditional systems and lead to significant deregulation of Japanese corporations.

With deregulation came increased opportunities for moral hazard and broad spread asymmetric risk. The consistent accounting scandals is in the crop up in Japanese news every few years have begun to seriously erode both domestic and international trust in Japanese corporations.

The core of this research assumes the belief that full IFRS implementation for both reporting and taxation purposes have the potential to reshape harmony to some degree. Especially when dealing with smaller less developed economies and any drastic shifts can cause large ripples that will spread outward and affect other factors. It is likely that in the a strong manufacturing country such as Japan, IFRS will ultimately lead to a shift in ratios and GDP figures, and this will eventually lead to shifts in FDI inflows. Taxation is a significant driving factor for Japan and given the current state of the Japanese economy and their strong pursuit of growth is likely only a matter of time before taxation is used as a more significant means of

generating or appropriating additional government funding. This does not diminish the fact that Japan is making strong head way towards complete convergence, the management style is generally honest and conservative and though rather risk-averse and prone to avoiding conflict Japan is still the third largest economy in the world and a necessary partner for the successful implementation, development and expansion of the IFRS initiative.

4.2 THE IMPACT OF IFRS IN A GLOBAL ECONOMY: CHINESE CASE

4.21 Introduction to China

The Chinese economy has exploded in recent decades. Beginning in the 1970s the Chinese government started to open the economy to foreign investment which has stimulated high economic growth since about 1980(Pew Research Center). There is currently a debate on whether China has succeeded in passing the USA is the least economy in the world, but the debate aside there still no question that the Chinese economy is the one of the largest in the world. This mass economic expansion has introduced the Chinese populace to economic conditions never before seen in modern-day China.

While not generally recognized as one of the most impacting factors for economic growth, with the rapid expansion of the Chinese economy the desire to maintain high levels of foreign investment necessitated the need for strong and reliable financial data. Throughout history, a diverse range of generally accepted accounting principles (GAAPs) have emerged, forged by the various combinations of political, sociological, and cultural factors, not to mention the different account goals in each economic jurisdiction. China is no exception to this fact.

Though considered by many to be a much more capitalist society than in years past, the fact remains that China is still a communist state with power centralized in the hands of a small group of people and the rights of its citizens and business leaders governed at the whim of what is considered best for the majority of Chinese society. What would be a widely considered best for the investors as a whole may not meet with the definition of what is best for the Chinese people as per the People's party. The fact that foreign investors demand transparency and high quality reporting has required China to attempt to strike a balance between what is deemed best for China and what is mandated by foreign investors. Despite China's efforts, this remains a significant issue still facing the Chinese market today as Chinese companies recently ranked lowest

transparency rating in the world in a survey performed by Bloomberg (Bloomberg Business, 2013). This underscores the fact that China's efforts to root out corruption have not yet eliminated threats to investors.

4.22 Historic Accounting in China

Unlike in the Communist example of Russia, accounting has held a substantial role in tracking economic activity throughout Chinese history with some accounting records from the 18th and 19th century still in existence today (Yuan, et al. 2015). Yuan, et al's research is significant because it demonstrates the accounting transitions at the different levels of Chinese society and the sophistication involved. The breakdown of accounting transactions was quite detailed for the time. There existed daybooks which contained the purchase and sales of goods on credit as well as money transactions such as loans, Interest and daily transactions. They also utilized account books which included entries with a variety of information such as shop transactions the nature of customer's purchases as well as deposits and debts. As accounting continued to evolve over the years, flowing account books were brought into practice. Such books kept track of goods sold, goods purchased, and daily expenditures within the shopper business. As their research paper points out, the accounting methods in China continue to gradually become specialized.

The research of Solas and Ayhan. utilized Periodization in order to present the differences in Chinese accounting evolution by way of the changes in era. By way of their research, the following timeline for Chinese accounting was presented.

- The dynasties period
- The republican revolution period (1911 Xinhai)
- The communist regime period, which established the Republic of China
- The cultural revolution period, "opened-door" policy period,
- The most recent period (becoming capitalist) - IFRS

Since the cultural Revolution in the 1960s, many aspects of Chinese society have been rooted in Maoist ideology (Yee, 2009), which greatly influenced all aspects of Chinese culture, politics and even accounting and persisted from 1917 – 1976. Maoist ideology was Marxist and very anti-capitalism (Zhang, et al. 2012), an ideology that makes involvement in the global economy a challenging prospect. Despite drastic improvements which have made the Chinese market a much more inviting prospect, remnants of Maoist ideology still have influence to this day. With the shift to a socialist market economy in the 1980's, the push for high quality accounting became essential in order for China to integrate into the international market and gain access to foreign capital markets.

4.23 IFRS Accounting in China

With the development of the Chinese stock market in the early 1990's, investors were faced with a undeveloped market, concentrated ownership, and weak rights. Chinese regulators had mandated that separate stock markets be established for both domestic and international investment which persisted until 2014 when the markets were fully opened to foreign investment, albeit through a complex system requiring local brokers. Furthermore, the existing Chinese GAAP, otherwise known as Chinese Accounting Standards (CAS), discouraged foreign investment as investors as they were unable to interpret the data.

In 2002 Chinese regulators of the QFII system identified that though China had one of the largest markets, institutional investors controlled far less market share than in most developed exchanges, which in turn limited capital investment (Oliver, et al., 2014). As a result China took steps and in February 2005 signed a joint statement to advance the use of IFRS within China, aimed especially towards internationally oriented companies (IFRS Foundation, 2015). In February of 2006, a new set of Chinese accounting standards, known as ASBEs, were released and mandatory application for all companies listed in China took effect. This

was an effort by the Chinese Ministry of Finance to converge with the IFRS regulations released by the IASB. Though the ASBEs are regularly revised and updated conjointly with IFRS releases, Applications of IFRS as released by the IASB is not permitted for use within China (Deloitte 1, 2015), though IFRS are still prepared by a number of companies for foreign investors (IFRS Foundation, 2015).

Which standards?	Number of companies	Per cent of companies	Market capitalisation (US Dollars)	Per cent of market capitalisation
IFRS	90	30%	841,020,300,539	69%
HKFRS	161	54%	319,844,402,277	26%
ASBE	45	15%	57,268,715,905	5%
Total	296	100%	1,218,133,418,721	100%

There are also a number of Chinese companies that use IFRS for the purpose of trading in the United States and in Europe.

Figure 4.21: Multi-Agency Model for China

Figure4.11: IFRS Foundation: Reporting Standard Utilization in China

when discussing the evolution of accounting standards, especially IFRS, it is impossible to do so in exclusion of the political system. Political institutions structure, organize, and order economic institutions and the conditions are no different in China (Huang, 2008). An interesting analogy is presented when Dan Awrey writes, "A *country's legal tradition,* to include accounting*, is little more than a thinly veiled proxy for domestic politics* (Awrey, 2014)."

Although the functionality of universal standards, such as IFRS, is somewhat indispensable at the global level, that is not strictly speaking, the reason so many jurisdictions, such as China and Russia, choose to implement them. It is often promoted that they in themselves are the means for accounting professionals, auditors and governments to gain acceptance in the international community and economic politics (Macve and Deng, 2015). Like Russia, the reliability and trustworthy of China's accounting regime is still somewhat questionable, not so much at its level of quality but rather at its level of implementation and enforcement.

Especially given the recent issues with one of China's largest companies overstating economic positions, as in the case of Alibaba Group, which was found to misrepresent accounting information right before a U.S. IPO. It's interesting to note that the Chinese government forbids the PCAOB from performing audit-quality inspections of Chinese firms and their U.S.-listed company auditors, whether on the mainland, in Hong Kong or in Macau (Marketwatch, 2015). Without proper auditing, how can investors give serious credibility to the information they're presented with. It brings into question whether or not the standards are being utilized properly and enhancing China's accounting transparency.

There are a number of major differences that exist between IFRS and ABSEs which support the function of this section and overall purpose of this paper to demonstrate how IFRS reporting, and any form of harmonization aligned with it, can affect the corporate reporting, the local contributions to the economy and ultimately the global macro-economic environment. A breakdown of some of the most significant differences between ABSEs and IFRS follows.

ASBE/IFRS

Prudence - ASBE specifies prudence be applied in the recognition, measurement and reporting of transactions. Specifically it states that assets and income shall not be overstated, nor liabilities and expenses be understated. The key phrasing the difference between these two is that IFRS states that financial information presented should also be neutral and free from bias. This minor bit of phrasing is vital because it permits Chinese companies to utilize bias sources, that can't be checked or challenged, to present favorable conditions for companies.

ASBE 2/IAS 31

Under IAS 31, interest in jointly controlled entities may be reported using proportionate consolidation or the equity method. In the case of ASBE 2 however, only the equity method of reporting is permitted. This is somewhat suspect since the equity method is generally used to report when a company holds significant

influence or control over the other party. In this instance, this would give investors the impression that Chinese companies possess a controlling influence in any joint venture.

ASBE 3/IAS 40

In relation to Measurement, IAS 40, with specific exceptions, requires firms adopt the same accounting policy for all investment properties. ASBE 3 on the other hand, does not include the stipulation. Therefore, Chinese companies can apply accounting policies which allow for the most favorable outcomes.

ASBE 4/ IAS 40

Under IAS 40, the land-use rights of rental properties may be reported as investment properties provided the fair value model is adopted. ASBE 3 allows use of the cost model or the fair value model. This is significant because it allows Chinese companies to apply fair value of the current market value is higher than the cost model. Conversely, if market conditions are not favorable, then Chinese companies may revert back to the cost model to retain a higher value thus presenting an unrealistic value.

ASBE 9/IAS 39

Defined benefit plans are required to carry benefit liability, such as pension and health insurance, as an expense throughout the employee service period. ASBE 9 does not address defined benefit plans. As a result, Chinese companies are capable of carrying artificially high assets.

Additionally Accounting for debt restructuring is governed by IAS 39 and limits the potential for abuse. Since de-recognition of debts are not covered in ASBE 12, it leaves Chinese companies able to exploit whatever condition they can in altering the terms of debt obligations and agreements to potentially significant advantage over foreign counterparts.

ASBE 9/IAS 39

IAS 34 requires disclosure of the basic and diluted EPS figures on profit or loss from continuing and discontinued operations. ASBE 34 only requires the calculation of EPS based on net profit or loss for the current period. This is significant as diluted EPS is a performance metric. It will almost always result in a lower EPS figure. As EPS is a major metric for investors to consider, any considerations that might lower this figure are unfavorable to Chinese companies.

4.24 Reporting Quality in China

Accounting quality is not solely determined by the accounting standards alone. The incentive firms have to provide high-quality statements is also a major factor. The more dependent a firm is on external capital the higher their reporting quality will be (Zeng, et al. 2013). Since the Chinese government owns many of China's listed firms, the government is able to provide support in the form of subsidies and favorable loans from state banks. As a result, state run entities are less concerned with investor perception (Zeng, C., et al. 2013).

According to Oliver, et al., China's weak institutional infrastructure impairs IFRS's ability to improve financial reporting quality and thereby increase foreign institutional investment. (Oliver, et al., 2014). Furthermore, because firms with high ownership concentration or large government ownership lack incentives to supply quality financial information, they are less likely to credibly implement IFRS. With that understanding, it could easily be postulated that there would be a decline in foreign investment into such companies (Oliver, et al., 2014). This directly reflects my case for the modified multi-agent model that is also utilized for Russia in this research.

Given the way that ASBEs are written, it appears clear that Chinese regulatory bodies are interested in maintaining a financial advantage for not only state run enterprises, but for all Chinese companies

representing the People's Republic of China. Given their lack of dependence on foreign capital as a primary source of funding, the quality of reporting received should be taken with some measure of skepticism and utilized with a strong measure of common sense.

4.25 Reporting Reliability in China

While the reliability of ASBE reporting as a solitary measure must be questioned to some degree, it is valid to point out that if utilized in conjunction with CAS the reliability may be considerably greater. CAS has evolved for use by regulators and debtholders, users which put strong emphasis on reliability. The fore mentioned issues in quality aside, there will always be discrepancies in translation (Baker, 2012). IFRS is intended to be flexible and allow for variations in interpretation. ASBEs are likewise open to interpretation but, as demonstrated in the IFRS section, to a much broader scope which may bring into question the reliability of Chinese reporting.

4.26 Reporting Transparency in China

It is well documented and quoted that the one of the primary benefits of IFRS reporting is the transparency and comparability that accompanies them. It increases the ease by which reports and performance between companies may be analyzed and compared. In 2013, Chinese companies received the lowest transparency rating in the world, in a survey performed by Bloomberg (Bloomberg Business, 2013). With such poor transparency, there is little question as to why investors are hesitant to enter into the Chinese market. Transparency is an important factor in attracting foreign direct investment and without good corporate governance and enforcement; transparency often goes by the wayside.

One of the primary aspects of transparency is timelessness, an issue that has been covered in several studies. It is been determined that Chinese companies take significantly longer to issue their financial statements than non-Chinese companies to. This can be contributed to China's weak corporate governance and governmental enforcement policies (Yuan and McGee, 2008). It is clear that Chinese companies are not fully acclimating to international cooperation and reporting or have little incentive to do so.

4.27 Multi-Agency in China

The details presented on the preceding pages provide a simplistic understanding of the agents involved in the utilization of unifying standards such as IFRS, or in this case ASBE, and their interactions in a natural market. In this case, the investors interests interest is not necessarily placed at the forefront of consideration, has state run firms and other Chinese companies utilize the ASBE standards in a manner that allows for poor transparency. The triangle provides a balance which exerts force from three difference sides. The Multi-agent model takes into account the type of relationship one expects to encounter in a democratic market economy. This situation is much more complex when we look at a communist state such as China.

Both traditional and multi-agent relationships are not upheld under such circumstances. While democratic politicians understand that their power lays in the hands of the people, i.e. investors/constituents, the close-knit relationship between government and companies in China is far more involved than in most countries. In the case of state-run firms, where can investors turn to for enforcement? Who ensures that their need for transparent reliable financial data is fulfilled? What assurances are they granted that their invested funds are being used to their benefit?

This arrangement would seem to represent the very pinnacle of a breakdown in agency (Shapiro, 2005) the level of information asymmetry present under the circumstances puts investors at a significant disadvantage without a counterbalance as shown in figure 2. Perhaps the only reason the relationship persists

is that the slowdown in the Chinese economy is pressuring the two agents to remain in check. Abusing the investor's good will and or investment would be one of the quickest ways to ensure capital flight and the preclusion from these beneficial capital markets. It may be argued that government and bureaucrats cannot be considered as agents because they are not elected by any one individual and are not working for the interests of any select person. Generally speaking that's true; on another hand it might seem to be an erroneous view, which can easily be demonstrated by China when we analyze the political angles.

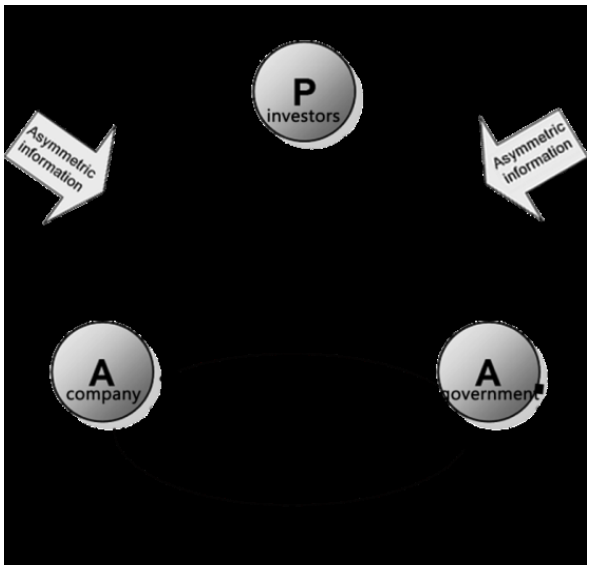


Figure 4.22: Multi-Agency Model for China

4.28 Game Theory, Moral Hazard and Asymmetric Risk in China

China is no stranger to game theory; the tensions flaring in the South China Sea in recent years are a clear demonstration of its willingness to mislead the international community to achieve its national goals. The extent to which such events have unraveled in modern history could not be easily counted. Game theory, however, is not limited solely to the political arena and it is therefore prudent to ask a few questions that

should perhaps be revisited in other areas of dialogue. Governments are funded almost exclusively by tax collection; however unlike the case of Russia, the Chinese government did not fully adopt IFRS but rather made the IFRS standards fit to their needs in the form of ASBEs. This brings us back to the Chinese government acting as owner or primary controller of a number of state-run enterprises.

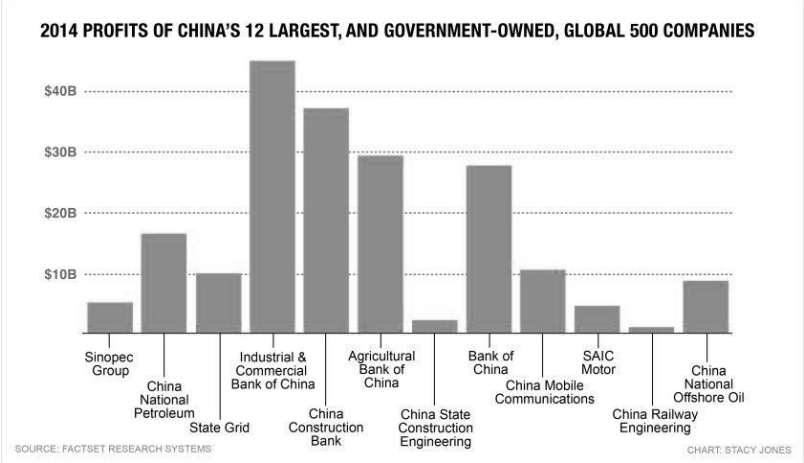


Figure 4.23: Multi-Agency Model for China

The top 12 performing Chinese companies, as shown above in figure 4.23, are all state owned. It demonstrates quite simply that IFRS, while beneficial, may not be vital to the growth and expansion of Chinese firms. These wholly owned state-run firms are directly funded by the government. While China may be seeking to open up a bit and encourage capitalism to a degree, it is also true that on more than one occasion, in recent history, the Chinese government has been misleading in its actions. Should we not expect similar occurrences to occur if it serves the best interest of the Chinese government instead of that of the foreign investors? Can investors adequately protect themselves and monitor the use of their capital investments. There certainly seems to be significant evidence to warrant caution and to encourage investors to be on guard for issues of both moral hazard and asymmetric risk.

4.29 Summary of China

this section provided surprising insights into the application of IFRS in communist states. Unlike as in the example of Russia, where the adoption of IFRS appears to be superficial and more for the benefit of gaining access to foreign capital markets, in the case of China a legitimate effort has been made to unify the country under a single set of accounting standards that work in concert with IFRS. Though ABSEs are not quite as balanced as IFRS in so much as they appear to give an advantage to domestic multinational companies, is still provide some measure of comparability and transparency to investors and users of financial information. That said, the reliability and transparency of accounting information coming out of China is still suspect. There are still poor controls and governance in relation to financial reporting and lack of proper enforcement forces the question of how seriously China takes its commitment to providing timely, accurate and reliable information to foreign investors. While the political environment in China has made a significant push towards eliminating corruption issues at the national level of government may still present opportunities for moral hazard and extensive asymmetric risk for investors.

With the majority of major Chinese companies owned and operated by the state, significant undisclosed transactions between government and corporate enterprises still occur. These transactions undoubtedly include in valuable information that foreign governments and investors will never be privy to. It is possible, that the clarity and transparency that investors demand will never be available in state run economies. As a results, investors should not rely solely on data presented from Chinese companies but should, as good business practice demands, evaluate various sources of data before investing significant funds into Chinese markets. On a final note it is valid to point out the danger inherent in any foreign investment, but especially in China. The stock market issues that occurred in latter 2015 resulted in the Chinese government freezing trade and essentially confiscating funds until they deemed it safe, for the Chinese economy and people, to reopen the market and released them. Such actions may occur in any market, but when dealing with

foreign markets, especially state run markets, the protections and resources for re-obtaining investments is severely lacking.

4.3 THE IMPACT OF IFRS IN A GLOBAL ECONOMY: RUSSIAN CASE

4.31 Introduction to Russia

For the purpose of clarification, it is here stated that Russia is included in the region of Asia for the purposes of this study. This is not due to any political or cultural preference, as it is often argued to be part of Europe as well, but rather because the large portion of Russia's land mass does in fact reside in the Asian region and including Russia in this section of the research, in the region of Asia, better balances the presentation of the paper. The inclusion of Russia in the region of Asia has no significant bearing on the findings or research of this paper has the regional groupings are simply used as a means of organization rather than any measurable factor to make assertions about regional tendencies.

The economic and political system in Russia has experienced prolonged and erratic periods of instability since the fall of the Soviet Union in 1992. It was at that point, with Russia in economic turmoil, that a choice had to be made. There were two primary options available to Russia, first being to maintain the status quo in hopes that stability would later provide conditions for change, the other being to implement stabilization measures and proceed with immediate reforms in an effort to transition from a planned economy to a market economy, the ultimate choice was to proceed with reform which has ultimately guided Russian ever since.

During Russia's economic crisis the currency evaluation was decimated and the entire banking system nearly collapsed while the GDP plummeted by nearly fifty percent. Several strong measures were implemented in 2000 which lead to stabilization. New legal codes were implemented starting in 1991 and the whole tax system was then modernized to crease an effective tax collection system (McGee, 2004). A flat income tax of thirteen percent was put in place and taxation on corporate profits was relaxed. This combination of actions helped stabilize the economy and usher in one of Russia's most productive periods in

history. During this time of prosperity Russia was able to build its markets to investment worthy levels which lead to a flood of domestic investment. The stock market during those years grew by approximately eighty percent and with this explosion of growth came a flood of foreign investment and with these investors came a demand for transparent data.

4.32 Historic Accounting in Russia

Accounting in Russia has traditionally been considered an insubstantial position. It is not unfair to say that accountants were little more than bookkeepers (Baker, 2012). As a socialist country the accounting system was standardized. Public planning ensured that resources and companies were state-owned and therefore fair-value accounting was not a consideration. It is important to inspect this further, as accountability was not one of the primary focuses; it's hard to point an accusatory finger at the body that controls everything; however accountability is exactly what is expected of a market economy.

The accounting system was so drastically different that concepts such as prudence were non-existent and others were not acclimated or suitable to the systems of GAAP utilized in true market economies (Kulikova, 2014). It might most readily have been described as a cost based accounting system except for the fact that it was too strict even for this naming to be an appropriate description. This system of accounting did not truly allow for any but direct costs, no other values really existed. To better demonstrate this belief, since profit and loss were demonstrated on balance sheets, income statements were not utilized which further hindered movements towards a market economy, however, with the goal of foreign funding in sight reforms quickly followed.

4.33 IFRS Accounting in Russia

First it is important to note that accounting in Russia is still utilizing IFRS and RAS very closely. Transition is still under way and even though IFRS were not declared mandatory for listed companies until January 1, 2012, a large number of companies implemented standards much earlier out of the necessity to gain access to capital markets (Baker, 2012). As the Russian government pushes forward with further IFRS implementation with the goal of full implementation for all companies by 2018, there are still substantial statutory changes that need to take place in order to close the gap between IFRS and RAS. As there has not previously existed an independent accounting standard setting body, and since the government has not participated in the monitoring of accounting, the implementation and convergence has been somewhat delayed.

Beyond the simpler matter of converging accounting standards is an aspect which researchers and other users will not easily untangle. The complexity of Russian politics is quite beyond the scope of most to comprehend or follow. That said, it is obvious from both past and recent events that the relationship shared between the government and the oligarchy of Russian companies is such that information asymmetry for researchers and general investors is inevitable. The transparency offered by IFRS reporting alone cannot be expected to adequately clarify the positions of Russian companies themselves let alone the country as a whole.

One of the most vital considerations still undergoing transformations for IFRS implementation is the tax system. In the previously state-run and public planned country, taxation was of no true consideration; however, the reformation towards a market economy is slowly leading to the modernization of this system. It is far from finalized however, and Russia still struggles to break free of the mindset that accounting is solely a tax based function. There are a number of major differences that have been identified between IFRS and RAS which support the function of this paper to demonstrate how IFRS reporting can ultimately affect the whole of the economy and ultimately affect it in the global macro-economic environment.

-Form Over Substance, one of the primary ideas behind IFRS, is laid by the wayside. Activities generally aren't recognized until proper documents are filed and processed (Schneider, et al., 2012). This leads to inaccuracies and lends a tendency towards dishonest reporting.

-Cost Base Accounting such as book value as opposed to fair value is still used. There is for instance depreciation, but it tends to deal with the cost of manufacturing as opposed to the value of the equipment.

-Russia has an extremely high inflation rate that should be taken into account; however the inflation effects are instead willfully ignored.

-RAS recognizes book value and not fair value; assets are not tested for impairments and there are inadequate disclosure documents, such as income statements.

4.34 Reporting Quality in Russia

IFRS is still within a transition phase, so the presence of errors within the preparations should be expected and remedied. The situation with Russia is considerably more difficult than that of other well-developed market economies. When working between two accounting standards such as IFRS and RAS the easiest method of preparation is generally through transformation. In this process; however, there is a great possibility for inaccuracies to occur. Transformation often has a tendency towards exaggeration (Desfleurs, 2011). It is likely that the errors and inconsistencies presented by transformation will work themselves out as the move towards convergence continues and transformation decreases. Though crucial differences still exist, it is the intensions of the Russian government to complete the full changeover by the end of 2018 (RIA, 2013).

If you consider that for the past several decades of accountancy in Russia, the goal was book-keeping and balance not accountability, it becomes clear that there is a 'generation' that will need to have old habits (Tarmo, 2012). That is to say, the existing pool of accountants is also somewhat problematic. Previously, no formal education or training was required for the purposes of accountancy. In many areas it still requires no specific qualifications; however, the Russian government has taken steps to try to insure those responsible for high level reporting will possess the skills and knowledge to fulfill their role.

4.35 Reporting Reliability in Russia

The fore mentioned issues in quality aside, there are a number of issues that will reflect directly upon the reliability of the financial reporting statements released by Russian companies. Chief among these issues is one that's quite common to other countries as well, but not necessarily to this degree. Russian companies first started using IFRS reporting nearly ten years ago. Banks especially, engaged in their use in order to gain access to capital markets. While the use of IFRS has been in effect for nearly a decade, there are still discrepancies in translation (Baker, 2012). Russia is a very large country and while it is possible for those with more exposure to English language to forgo this barrier, many are unable to do so.

4.36 Reporting Transparency in Russia

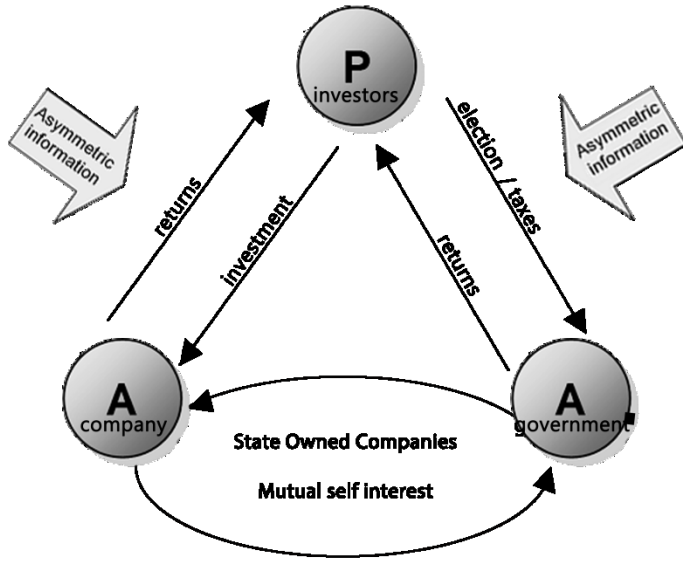
It is well documented and quoted that the one of the primary benefits of IFRS reporting is the transparency and comparability that accompanies them. It increases the ease by which reports and performance between companies may be analyzed and compared. It has been suggested that this may prove difficult within the scope of the Russian economy as there is a significant population of businesses which operate somewhat illicitly and will have no interest in paying taxes. While illicit operations do tend to have significant earnings,

the great benefit to honest operations within Russia is that capital markets are scarce and IFRS reporting will make access to them significantly easier (Mulyadi, 2012).

4.37 Multi-Agency in Russia

The scenario mentioned on the preceding page provides a simplistic view of agents working cohesively with the interests of the investor. The triangle provides a balance which exerts force from three difference angles. The model took into account the type of relationship one might encounter in a democratic market economy. This situation becomes much more complex when we consider the relationship that may be present in the case of Russia.

The investors still have expectations of both the government and companies but the relationships are not the same. While politicians know that their power lies in the hands of the people, i.e. investors, the relationship between government and companies in Russia is far closer than in some countries. In many cases the companies are state owned or controlled. In the case of a state-run organization, where does the investor's protection originate? Who ensures that their preferences are known and met? In short what guarantee do they have that their invested funds are being used to their benefit?



This situation would seem to imply the very pinnacle of a complete breakdown in agency (Shapiro, 2005) as the government and the companies have far more information and in many cases their interests will be mutual, putting investors at a significant disadvantage without a counterbalance as shown in figure 2. Perhaps the reason the relationship stands-is that the limited capital access helps keep the two agents in check. Abusing the investor's good will and or investment would be one of the quickest ways to ensure capital flight and the end of these beneficial capital markets. It could be argued that government and bureaucrats cannot be considered as agents because they are not elected by any one individual and are not working for the interests of any select person. Generally speaking that's true; on another hand it might seem to be an erroneous view, which can be more readily seen in the case of Russia if one wishes to review the political angles.

4.38 Game Theory, Moral Hazard and Asymmetric Risk in Russia

Without going into politics in any great measure, it is fair to state that Russia is no stranger to game theory. The extent to which such events have unraveled in modern history could not be easily counted. Game theory, however, is not something limited solely to the political arena and it is therefore prudent to ask a few

questions that should perhaps be revisited in other areas of dialogue. First of these being, if most governments are funded almost exclusively by tax collection, why then is the Russian government less concerned about relinquishing control of their sovereign rights to set accounting standards and taxation? This comes back to our previous model where we stressed that in some cases the Russian government is the owner or primary controller of a number of state-run enterprises.

As an example, you can see the top 6 performing Russian companies below in figure 3. It demonstrates quite simply that between 2005 and 2010, while reporting via IFRS, their net income has continued to increase. This is not true of all Russian companies utilizing IFRS; however it is true of most.

The thing of interest in this chart however is not the growth of the companies themselves, but rather the controlling interests behind the companies. Novatek is Russia's number one natural gas supplier. 19% of its holdings is controlled by Gazprom, the second largest, and wholly owned by the Russian government, natural gas supplier. Transkreditbank on the other hand is not directly owned by the Russian government; however it is a wholly owned subsidiary of another banking organization which the Russian government controls 60% stake in. In short of the top six performing companies, the government is directly benefiting from at least three of them.

While it is true that Russia is seeking to open up a market economy, it is also true that on more than one occasion the government has been misleading in its intentions. Should we not expect that similar occurrences might happen in relation to government controlled entities? Is there a way for the investors to adequately protect themselves and truly monitor the use of the capital investments flowing into the Russian market? Only time will tell how these events will play out, but there certainly seems to be significant evidence to warrant caution and to encourage investors to be on guard for issues of both moral hazard and asymmetric risk.

In closing this line of thought, it is interesting to note that full IFRS adoption is still relatively new and it is likely not being utilized at maximum potential yet, even though some companies and banking institutions have over a decade of experience with them. That said, some research has shown that under IFRS,

technical efficiency among private domestic banks is lower than under RAS, or in other words their ability to operate at the lowest point on a short run cost curve has suffered. What is more surprising than this is that while foreign private banks have continued to operate higher than their Russian counterparts, it is actually the state-owned banks that are operating most efficiently. While this is certainly not beyond the realm of possibility, one would think it prudent to ask why this is the case and investigate, thoroughly.

4.39 Summary of Russia

Though this concert between the two reporting standards is amenable, it is still not ideal. With our previous section in mind, I would suggest that it is entirely possible that Russia's adoption of IFRS had less to do with the benefit to the country, the global market, and the investors and more to do with the desire to access the financial capital available. While not unlike many other adopters in this regard, the close relationship between the state-owned companies and the government brings to the forefront memories of the Russian financial crisis and how the redistribution of wealth somehow ended up, not among the masses as was intended, but among a hand full of oligarchs who now rule the country. With such poor controls in place to enforce the multi-agency relationship within the Russian market, it would be advisable for investors to limit their exposure and pay close attention to the Russian market and political environment to more promptly identify opportunities for moral hazard and extensive asymmetric risk.

The core of this research focuses on the belief that full IFRS implementation for both reporting and taxation purposes has the potential to reshape to some degree the global economy. Especially when dealing with the smaller or less developed economies any drastic shifts can cause large ripples that will spread outward and affect other factors. It is my belief that adopting IFRS within a country will ultimately lead to a shift in ratios and GDP figures, and this will eventually lead to shifts in FDI inflows. Comparing the results

between Gazprom's statutory filing and that of the IFRS replacement there appear to be significant upward shifts in sales reporting and revenue generating activities. While taxation may not be an important model for the Russian Federation, the majority of countries have no issue with using taxation as a means of generating or appropriating additional government funding. Therefore, results such as these on a grander scale may provide a tipping point for wide spread adoption. Furthermore, since investors always desire quality data, and companies almost always desire additional capital funding, enticing the governments of the world with the promise of increased cash flow may provide just the incentive needed to see the trifecta multi-agency relationship closed tight and even more widespread implementation taking hold.

While this section was not written with the intent of extensive financial reporting evaluation, it has opened up interesting avenues of thought. While evaluating Gazprom was beneficial, it's only a look at one side of a multi-faceted figure and the next steps will require extensive evaluation on a wider scale in order to view the rest. In future research I will strengthen my assumptions and lend weight to my theories by expanding this research to include the analysis of the top 30 companies in Russia. This will provide me the opportunity to cover a larger percentage of the financial generators at one time. Since the top 35 companies in an economy generally contribute to about 35% of the GDP, analyzing these 30 statements in a similar manner as Gazprom and recalculating the new revenue figures and payments will likely provide the perfect data to support my claims that it can be substantial enough to shift global rankings and influence FDI inflows.

4.4 THE IMPACT OF IFRS IN A GLOBAL ECONOMY: INDIAN CASE

4.41 Introduction to India

The economic and political system in India has experienced prolonged and erratic periods of instability since the fall of the Soviet Union in 1992 (Subramaniam, 2005). It was at that point, with India in economic turmoil, a choice had to be made. There were two clear options available to India, first being to maintain the status quo in hopes that stability would provide conditions for change, the other being to implement stabilization measures and proceed with immediate reforms to transition from a planned economy to a market economy. Indian leadership elected the latter, a decision that has guided India ever since (Shankaraiah and Rao, 2004).

During India's economic crisis the currency evaluation was decimated and the entire banking systems nearly collapsed while the GDP. Several strong measures were implemented in 2000 which lead to stabilization. New legal codes were implemented starting in 1991 and the whole tax system was then modernized to crease an effective tax collection system (McGee, 2004). A flat income tax of thirteen percent was put in place and taxation on corporate profits was relaxed. This combination of actions helped stabilize the economy and usher in one of India's most productive periods in history (Nagaraj, 1996). During this time of prosperity India was able to build its markets to investment worthy levels which lead to a flood of domestic investment. The stock market during those years grew rapidly leading to a flood of foreign investment and with these investors came the demand for transparent data.

4.42 Historic Accounting in India

Prior to the 1600s India was divided into independent kingdoms. The economies were simple and agrarian principals were predominantly followed. The Kings revenues were collected via a form of land tax allowing the monarchy a fixed share of crops. It was with the establishment of the East India trading Company in the 17th century that trade gained economic dominance ultimately resulting India's annexation by the British

Parliament in 1858 which effectively guided the country economically until their independence in 1947 (Khumawala, 1997).

Following India's independence it was organized in the 28 states was seven union territories. These territories operated under an accounting system controlled by the executive branch of the central government which developed and regulated all rules relevant to maintaining accounts. However with extensive growth and the widening range of accounts the historic system quickly became outdated necessitating a system that better classified transactions and operations. Though the country has a democratic constitution, the leaders since the 1950's have held a tendency towards socialist ideals and have often tried to implement their ideals upon the nation. With the national emergencies that arose in the mid 70's, by the 1980's, India was considered a predominately socialist leaning state with a large majority of state run ventures (Rakagopalan, 2008).

Ultimately a detailed accounting organization was developed that specifically delegated responsibilities and oversight for accounting within India (Khumawala, 1997). At present the formulation of Indian accounting standards is governed by the Institute of chartered accountants of India (ICAI). This body presents its accounting standards to the national advisory committee on accounting standards (NACAS), a branch of the Ministry of corporate affairs. The NACAS makes official recommendations on IAS to the central government.

A large percentage of India lives in rural poverty. The majority of these citizens are uneducated and their economic development is still underway. Their greatest source of income comes from agriculture, and agriculture has virtually no accounting system. Furthermore India's accounting practices are quite diverse as a result of more than 18 languages and countless dialects spread throughout the 28 states and seven union territories each of which has a distinct culture and trade practice.

4.43 IFRS Accounting in India

Since the early 1990s India's economy has experienced expansive growth with an average annual rate of 8%. However, the country socialists leaning past have proven to be a threat to its continued success (Rakagopalan, 2008). Though the country enjoys the financial gains afforded it by capitalism, words such as capitalism and profit are still somewhat taboo in the country. The desire for continued growth has necessitated that India become more involved with capitalist nations. As a result India has had to reorganize its accounting structure on numerous occasions. The most recent advances are its movements towards international accounting standards.

Like most countries involved in the IFRS movement, India has not elected to adopt IFRS as released by the IASB but has instead gone the route of convergence (IFRS PROFILE – IFRS.ORG). To date India has implemented 39 converged Indian Accounting Standards (IND AS) (.Ind AS pocket guide 2015 – PWC). This move towards internationally recognized accounting standards was prompted primarily by India's listed companies. Those listed in those wishing to be listed in the future must be more transparent in the reporting if they wish to have access to foreign capital markets. Of great significance is the fact that India has been involved in countless accounting scandals stretching back to the 1950s when they first gained independence and persisting through the decades up to present. The scandals have consistently been multimillion dollar scandals but in the more recent history there have been numerous multibillion dollar scandals. If India wishes to retain access to foreign capital investment it is essential that they win the confidence of the investing public by enhancing their transparency and providing quality data that is reliable.

Even though India has begun voluntary reporting under a system of IFRS, like most convergent states they have elected to maintain a national GAAP as well, essentially utilizing two sets of accounting standards, one for investors and one for statutory filings. Voluntary IFRS adoption began in 2015 and subsequent mandatory adoption will begin in 2016. The calendar date for the mandatory implementation is being based on corporate valuation ranges as opposed to broadly rolling out across all publically traded

corporate entities. (Deloitte, IASPlus, 2015). The current roadmap for mandatory IAS implementation spans through 2019 at which point, given the current plan, convergence should be relatively complete.

The research of Meenu and Kavitha (2014), suggests that this implementation of IFRS is an exceptional opportunity for Indian corporations to enhance their business practices and reassure the investing public. Specific areas of improvement that they highlight include; reshaping management reporting systems to ensure corporate leadership has essential information, improving disclosure financial statement users, improving the metrics used to evaluate performance, benchmarking against global peers, ensuring appropriate training and qualifications for all financial departments and setting accounting policies in line with global industry practices (Meenu and Kavitha, 2014).

Though India has implemented IND AS, it is still not recognized as an equivalent to IFRS due to the significant carve-outs, as they are called by KPMG (KPMG, 2015), which give unfair advantages to Indian corporations. The most significant carveouts has put forth in KPMG's IFRS notes in comparison with IND AS, have been presented below.

4.4 Significant Carve-Outs

- First-time IFRS adopters are required to use the GAAP that was utilized immediately prior to adoption, however Ind AS 101 specifies previous GAAP as the GAAP applied by companies to meet their reporting requirements in India immediately before IND AS i.e. existing notified standards

- Under IFRS conversion options are derivatives reported at fair value whereas IND AS recognizes embedded foreign currency conversion options as 'equity'

- IFRS mandates the use of corporate bond rates by default, India on the other hand requires the use of government securities yields for determining actuarial liabilities (except for foreign components)

- 'Bargain purchase gains' are recognizes income on profit and loss statement under IFRS and as 'capital reserve' under IND AS.

- As per IFRS loans must be reclassified as current liabilities however IND AS classifies loans as noncurrent even in cases of breach of a material provision if, before the approval of the financial statements, the lender agreed not to demand payment

- IND AS does not permit straight-lining for escalation of lease rentals in line with expected general inflation whereas IFRS mandates it.

- Excess of the investor's share of the net fair value of the investee's identifiable assets and liabilities over the cost of investment is transferred to capital reserve under IND AS instead of in the statement of profit and loss as is required by IFRS.

- IFRS requires alignment of accounting policies whereas IND AS allows the option not to align accounting policies for Associates and joint ventures with those of parents if deemed unsuitable, impractical, or excessively difficult to perform (KPMG,. 2015).

4.45 Reporting Quality in India

IFRS is still within a transition phase within India however corporate management has felt the pressure to reform accounting practices and increase the level of transparency as is required by alert lenders, regulatory

agencies, financial analyst and other users of financial information. It has become clear that the quality of information determine how efficiently they have performed in their role of corporate governors.

India is one of the top Asian countries that allow voluntary adoption of IFRS by individual companies. Numerous large and globally competitive Indian companies already use IFRS. These companies comprise over 23 percent of the Nifty 50 market capitalization thus demonstrating that the use of IFRS as a high quality reporting standard has greatly enhanced their appeal to international investors which in turn facilitates their access to the international capital markets (Hoogervost, 2015). India has made huge inroads into improving its accounting quality under the guidance of President Modi. The country is shown that it is resolute in its desire to improve its international image. The new IND AS are recognizes a huge step in the right direction towards establishing and using a high set of quality standards for investors.

Various surveys taken by both corporate leaders and corporate stakeholders make clear that it is generally accepted that IND AS is a high quality standard that will allow Indian companies to engage with investors in a fair and equitable manner. In fact reporting quality is generally regarded as one of the primary benefits that IND AS will provide, as declared by approximate 84% of those surveyed by PWC. That said IND AS is still not equivalent to IFRS as the carve-outs shown in the previous section demonstrate, and due caution must be used when analyzing financial data.

4.46 Reporting Reliability in India

Reliable, consistent and uniform financial standards are a vital part of corporate governance and a keystone to maintaining investor confidence. The environment of the Indian economy can be challenging and occasionally necessitates some divergence from IFRS (Grant Thorton LLC, 2015). The historic precedent for accounting reliability in India certainly presents cause for doubt however both domestically within India and internationally throughout the global economy is genuinely believe that the movement towards IFRS via IND AS is a significant step which should help increase the reliability of accounting information from Indian

companies. Areas of contention that are likely to draw ire fall in areas such as inventory valuation, depreciation accounting and the use of alternative accounting treatments when permitted. Such broad flexibility presents challenges in judging the quality and reliability of financial information. Furthermore the ability to compare financial information within any given economy, let alone an entire global industry, becomes extremely impaired (Shankaraiah and Rao, 2004). There is a lack of professionals with adequate basic accounting experience, let alone at the international level. They are as of yet untrained and unfamiliar with how best to utilize international accounting standards to maximum benefit for the company and its stakeholders (Gurpret and Amit, 2014). None the less the burden of demonstrating and proving quality and reliability of IND AS falls on these individuals.

4.47 Reporting Transparency in India

India's economic rise has driven transparency to the forefront of accounting issues in India and has quickly resulted in valuable and usable financial information for corporate stakeholders (Shalini et al., 2009). Transparency boils down to an issue of ethics, as has been clearly demonstrated by past scandals, ethics is not one of the stronger virtues of India's corporate ethos. The lack of quality accounting instruction in India has helped foster a system of corruption in the past that has generally shrouds truth and lacked transparency. If more strenuous care is taken with accounting instruction, ethics can be learned through the classroom. Students can learn the importance of protecting and promoting the integrity of their company's financial records and the international benefits it affords. If ethical behavior can be improved at the base level and the tolerance for unethical behavior weeded out, it will further both quality and transparency in India's financial reporting. Despite continued progress, India has a decentralized government and the economy is extremely complex as a result of the various bureaucratic systems that have broad discretionary powers (State.gov 2015).

The level of capital market access and the amount of investments Indian companies are able to entice will depend largely on the level of their transparency in financial dealings (Shalini et al., 2009).

4.48 Multi-Agency in India

The problem presented by India is that by its very Constitution it is a democratic state however as mentioned in previous sections of this paper, from the earliest days of independence the governmental leadership has opted to pursue socialist ideals. The state took on the role of attempting to spur high growth rate while relying on domestic industry to build up local development. It was expected that the benefits of a high growth rate would roll down to the poverty-stricken lower-class increasing their savings and enable them to invest. Unfortunately this proved hugely unsuccessful.

Despite the fact that India is a democratic country, the government has consistently demonstrated socialist activity that destroys investor confidence. Examples of this stretch back to the early '70's with the nationalization of India's largest banks, seizure of the means of production such as coal and then public services such as health. Years later followed by legislation requiring Incorporated companies in India with more than 40% foreign equity to gain approval in order to conduct business. In the late 70s population controls were enacted by the government, strongly encroaching on personal rights without even the regard for constitutional amendment. Such conditions clearly demonstrate a lack of disassociation between government and corporate interests and a complete lack of individual investor protections, circumstances best demonstrated by the modified multi-agency model for state run enterprise.

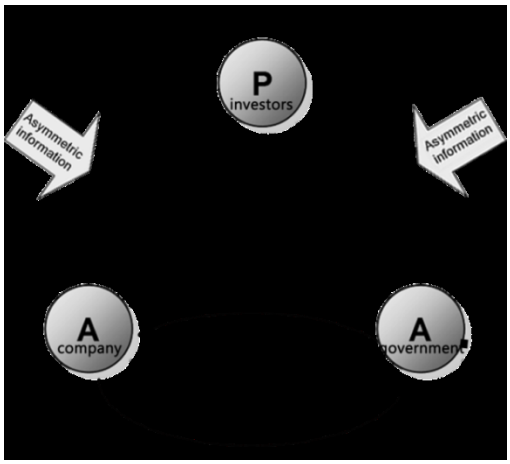


Figure 4.24: Modified Multi-Agency Model India

India's legal system has eroded public sector and investor protections. India is ranked 186th, by the World Bank's ease of doing business (State.gov, 2015). The most common investor complaint tends to be the failure of Indian entities to uphold contract sanctity. Dispute resolution of corporate matters takes an average of four years to resolve in Indian courts. Despite the fore mentioned details, India is making great progress weeding out corruption and improving transparency for investors. While India would have fallen under the multiagency model for socialist countries, despite being a "democratic capitalist" due to its recent past, the country is quickly transitioning into a standard free market economy with properly separation of corporate and government interest and investor protections, as represent by a standard multi-agency model.

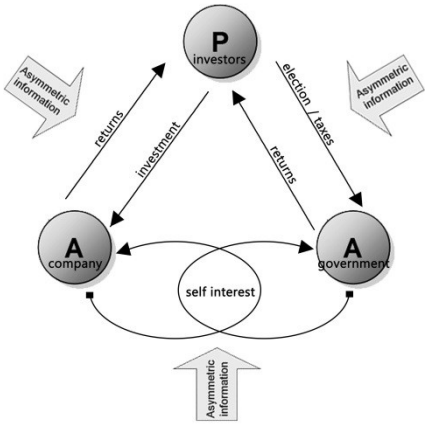


Figure 4.25: Multi-Agency Model India

4.49 Game Theory, Moral Hazard and Asymmetric Risk in India

While it is certainly not to say that there may not be altered motives to India's implementation of IFRS, it would appear to be quite straightforward as the developing nation seeks to procure access to foreign capital for the purposes of maintaining growth and bettering the circumstances of the Indian people. Generally speaking India does not face the same issues of rivalry and distrust that China and Russia are forced to contend with. That is not to say that there are not significant matters that need to be addressed for India.

As pointed out earlier in this paper, India's past dealings are rife with corruption and underhanded dealings. The sheer number and scale of the accounting scandals that has plagued India's corporate culture makes clear the fact that moral hazard and asymmetric risk are very real dangers for investors to consider when entering the Indian market. The nature protections for public servants combined with the vast array of bureaucratic rules and regulations throughout India's territories create a breeding ground for moral hazard as those individuals more accustomed and knowledgeable about the various practices between territories and the loopholes that may be employed may be encouraged to pursue business activities under false pretenses or by misleading other stakeholders.

While the use of IFRS is helping India to greatly improve its financial transparency, there is still significant uncertainty as some business practices remain unclear in the political and fiscal arrangements are not always presented in a timely manner. Investors who failed to rigorously investigate the laws and regulations covering the regions they invest in may be unable to identify asymmetric arrangements that would otherwise influence their willingness to engage in investment. Is important to distinguish that in the circumstances asymmetry does not refer to an illegal practice, but rather the omission or oversight of details that parties are under no obligation to put forth, such as for instance reporting variations that may exist between territories.

While it is true that India is striving towards a proper market economy, the not so distant practices of the government, the volatility that has often ensnared Indian politics, the wide spread corruption that has plagued Indian corporations and the as still developing investor protections should definitely be factored into any risk assessment by potential investors.

4.49 Summary of India

India's convergence process with IFRS via IND AS is without question of movement in the right direction. Its acceptance is being recognized and applauded throughout the international community and India is reaping rewards for its implementation. The full benefits are as yet unattainable due to substantial issues that still exist with the current state of any and accounting. Foremost among these concerns is the carve-outs which allow too much leniency in reporting, presenting what some might consider to be inaccurate data to investors and complicating company comparisons. 70 years of socialist influence by government entities within India have played a substantial role in the development of accounting standards. Even with the implementation of IND AS the underpinnings of socialist influence can still be identified. Nonetheless, as India continues to grow in the international community and the demand for transparent and fair quality information continues to insert its

own pressures, it is likely that Indian accounting will continue to evolve and more closely aligned with IFRS as put forth by IAS.

The continued growth and development of the accounting standards in India and the future success of IFRS convergence there will depend largely on the country's ability to maintain political stability, root out corporate corruption and continue to attract foreign interest. As previously stated, with the rapid growth and development currently sweeping through the nation, India's in an opportune position to reshape its corporate culture. With private savings increasing and educational opportunities opening up to young Indians in many business fields, but especially in accounting, it is vital that this opportunity to instill strong ethical values to future business leaders and accountants. It should therefore be a priority for India to develop quality educational centers to provide this training. Failure to do so threatens the future success of business ventures in India and risks damaging the relationship between foreign investors and Indian corporations.

Perhaps most interesting about the case of India is its ability to demonstrate the shift between the multi-agency state run model and the standard multi-agency model. The differences in decision making by government and corporate entities and how their decisions or relationships have affected foreign investors under a socialist model compared to how their shift towards a true free market economy with the clear separation of corporate and government interest with greater investor protections is spurring tremendous economic growth and preparing India to be one of the next global economic superpowers.

CHAPTER 5: IFRS IN A GLOBAL ECONOMY: AMERICAS

5.1 THE IMPACT OF IFRS IN A GLOBAL ECONOMY: BRAZIL CASE

5.11 Introduction to Brazil

Like India, Brazil is a country that is historically been plagued by frequent political and economic turbulence. It has repeatedly experienced extreme high and low economic points due to its heavy reliance on imported commodities such as oil and it somewhat limited exports, primarily coffee. Brazil's dominance in the coffee market started in the 1970's and spurred rapid economic growth (Gruss, 2014). At the time, Brazil was responsible for supplying the majority of the world's coffee, and it accounted for approximately 70% of Brazil's exports. Historically speaking Brazil has been a primary producer of sugar and for a short time there was a gold boom however coffee has been the lasting economic commodity. This is proved both beneficial and detrimental. Generally speaking coffee is a safe commodity with high demand around the world however has demonstrated in in the past, interruptions to commodity pricing tend to stagger the Brazilian economy.

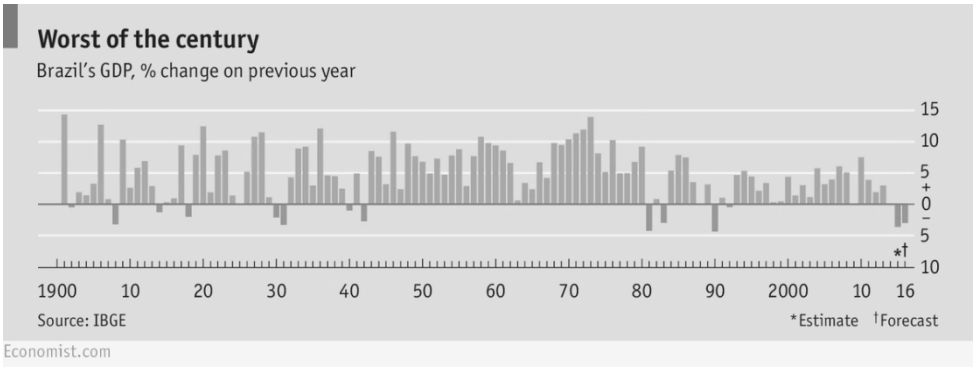


Figure 5.11: Brazil's Economic Volatility – Commodity Economy

Opposite the export commodities would be the import of commodities such as oil. In 1973 Brazil experienced a huge economic shock as the cost of importing oil doubled. Brazil being almost wholly reliant on imports for its oil consumption, they were forced to engage in borrowing to maintain their level of consumption (Gruss, 2014). This eventually caught up with the government in the 80s as they became unable to finance and service their international debts, which then compounded issues as international lenders became hesitant about lending to Latin American countries. These compounded issues led to hyperinflation, recession and political turmoil (Economist 2016).

In Brazil's modern political history, it has flipped back and forth between both military and democratic `. From 1946 to 1964 Brazil was run by a Populist democratic regime ending in 64 with a military coup. Following the coup, Brazil operated under military rule for nearly 2 decades, from 1964 until the mid-80s. The subsequent economic crisis of the 80s demonstrated the ideological differences between military rule and democracy and as the country plunged into chaos democracy once again claimed control (Codato 2006). By the mid-90s, the Democratic leaders had managed to institute a currency reform for the real and the economy was expanding rapidly at an average rate of 5.1% annually and Brazil was able to maintain a strong growth rate until the late 90's early 2000's (Mavar et al. 1999). Recently, Brazil has shifted to a rule based system of accounting which requires a different mindset, one which the country may not yet be prepared for (James, 2011). Unfortunately, even in modern times, Brazil has been plagued with corruption and scandal just as India is. In current news, Brazil's female president, Dilma Rousseff, is undergoing impeachment proceedings for an accounting scandal (Forbes, 2016). There've also been repeated scandals with major corporations such as Brazil's primary state run oil company, Petrobras. There are even multibillion-dollar scandals related to the 2016 Olympic construction projects in Rio underway (Time 2016).

The country full of impoverished people, political and corporate establishment rife with corruption and a looming economic crisis caused by government expense exceeding revenue, Brazil is poised once more to send into political and economic unrest. That said, the Brazil is also in an opportune position to reestablish itself. Following the change of military regime back to democracy, many of the old players were able to retain

their rank and position. In recent years the younger generation is gaining control of the legal system, the government and the economy. This younger generation of civil servants seems set on eliminating corruptions. They have grown up under democratic conditions and are generally more qualified with nearly a quarter of them possessing postgraduate degrees (Economist 2016).

5.12 Historic Accounting in Brazil

Accounting was first introduced to Brazil with the coming of the Italian Renaissance. As the Portuguese colonized Brazil they also introduced taxes. With their colonization came various changes such as cultural and economic reforms with the objective of establishing an economic relationship with England. The creation of trading companies necessitated the need for education reform as the people of the colony black even basic knowledge of technical practices (Rodrigues et al., 2011). In 1817 joint stock companies were first formed for the purposes of exploiting natural resources. However, even with reforms the economic structure of Brazil remained unchanged; it remained in agricultural exporter of raw materials and importer of manufactured goods.

It wasn't until Brazil's industrial boom in 1850 that the first commercial code was developed. It was this code that set the groundwork for the accounting profession by instituting a system of mandatory bookkeeping that required annual balancing (Trisciuzzi, et al, 2010). The commercial code breathed life into Brazilian markets in a way that a decades of colonization had failed to do. But just as in all cases of industrious nations accounting was interconnected with political policy and economic cycles. In short though it's fair to say that Brazil's accounting practices were strongly influenced by the British.

In modern times, Brazil has remained commodities market however the accounting practices themselves have changed. Often it has been the upswings and downswings in the economy and the fluctuating political environment of Brazil have strongly influenced the range of accounting, the financial reporting requirements and the level of disclosure required. Since Brazil operates much like India and that is a

decentralized government with independent bureaucracies and varied accounting practices between regions. This has often created asymmetries and rivalries at different levels of government which resulted in superficial regulations (Trisciuzzi et al, 2010). This level of decentralization and information asymmetry presented ideal conditions for the rapid spread of corruption, ultimately manifesting in the scandals that are seen in modern times.

5.13 IFRS Accounting in Brazil

The road to IFRS for Brazil first began on December 17, 2008. Width the Brazilian exchange commission's approval the convergence of Brazilian gap with IFRS began with full adoption planned for 2010 (IFRS.org 2015). As one of the largest economies in the world Brazil is unfortunately beset with poor enforcement and strong incentives for financial manipulation due to taxes. Additionally as a commodity market financial conditions tend to be somewhat volatile. This is assisted by poor governance and the variability between regional bureaucracies (Murcia et al., 2010). It was believed that adopting IFRS would increase transparency and help to alleviate some of these conditions. However, whether or not this has occurred is strongly in question.

Evidence suggests that Brazil is likely a label adopter, utilizing the benefits of the IFRS name without doing due diligence and effectively implementing the standards. Label adopters did not tend to benefit greatly from simply applying the label and can generally be easily recognized as true adopters experience better results (Daske et al., 2007). The research of Murcia et al., colored financial data for the years ending 2006, 2007 and 2008. Their findings showed that half of the companies did not disclose the effects of IFRS; they did disclose fair value of their financial instruments however omitted the criteria used in computing them. In summation their findings were that IFRS did not have a positive impact on corporate disclosure and that these companies failed to disclose the information required by IFRS (Murcia et al., 2010).

IFRS of Notes

- IAS 26 – Accounting and Reporting for Retirement Plan Benefits. Retirement benefits tend to be large debts, it's somewhat essential to include IAS 26 however in Brazil this will require coordination with the pensions regulator (PKF, 2009).

- IAS 29 – Financial Reporting in Hyperinflationary Economies. While it's true that Brazil's not been considered a hyper inflationary economy since 1998, the country has recently experienced a 10 year high, see the chart graph below, and with the level of widespread corruption and scandal at the top levels of government currently plunging the country into uncertainty, conditions may change rapidly (PKF, 2009).

- IAS 21 – The Effects of C hanges in Foreign Exchange rates. CPC 02 does not consider subsidiaries to be extensions of the parent company and therefore mandates they use the same functional currency as the parent (PKF, 2009). This is significant since it's already known that Brazil engages in exchange-rate manipulation, which may affect the overall outlook of Brazilian companies to investors.

- IFRS five, 16 and 40 - property, plant and equipment, investment property, and noncurrent assets. IFRS mandates that assets be revalued at fair value on a regular basis. CPC 27, 28 and 31 forbid revaluation of individual assets under law, entire classes may be revalued. In other words the value of assets may be artificially inflated.

- IAS 33 – Earnings per share – Brazilian GAAP are less demanding than IFRS in regards to disclosure, so while Brazil's corporate law requires the disclosure of earnings per share, it does not specify how it's to be calculated. As this is a major investment indicator for investors, no clear

specification on how it's to be calculated may make investors suspicious and encourage companies to misrepresent data.

Figure 5.12: Brazil's Inflation levels Rising – Hyperinflation coming?

5.14 Reporting Quality in Brazil

First and foremost we can say that accounting quality tends to be higher among those large Brazilian firms which utilize big in auditors. This is one way that companies can distinguish themselves in a regulatory environment that is generally considered weak to investors. That said the research of De Mello and Carlos demonstrated that the close link between financial reporting and taxes and Brazil encourages auditors to be more lenient on the interpretations of tax code (De Mello and Carlos, 2004). There is proof that those utilizing

big in auditors report lower income than companies utilizing other auditors which might imply higher quality accounting practices and less tolerance towards questionable interpretation of tax code.

In 2012 Brazil ranked 69th of 174 countries in a corruption assessment. Corruption scandals are frequent in Brazilian politics, often involving high-ranking political figures. The country has a long history of data misrepresentation. The fact that Brazil's application of IFRS allows more leeway and less detail in reports, in some instances may present circumstances that might easily be taken advantage of in scandalous activities. Furthermore it's relevant to once more point out that Brazil is generally considered and IFRS label adopter, i.e. not truly utilizing the standards to increase transparency and reporting quality. Even when reporting required data is frequently omitted and/or interpreted differently via legal alternatives. It would be advisable that any data obtained in regards to Brazilian companies be verified as carefully as possible before making any investment decisions.

5.15 Reporting Reliability in Brazil

Reliable, consistent and uniform financial standards are a vital part of corporate governance and a keystone to maintaining investor confidence. The environment of the Brazilian economy presents many uncertainties based on the varied legal circumstances, tax rules and corporate implementation choices that may be involved. The historic precedent for Brazil presents a picture of uncertainty. As with quality companies utilizing a big in auditor are likely much more reliable than those without however the lenience involved with tax reporting by both also raises questions. The acceptable variations may make it difficult if not impossible to clearly compare companies within an industry let alone across national boundaries. The quality of the professionals operating in Brazil still requires improvement, however, more and more young Brazilians are obtaining four-year degrees in business from accredited universities. This is an encouraging sign that future professionals in Brazil's accounting environment will be qualified, knowledgeable and ethical

5.16 Reporting Transparency in Brazil

In a 2013 World Bank report, Brazil ranked 1 multiagency and 30 out of 185 countries in terms of the ease of doing business (World Bank, 2013). The country has an extremely difficult regulatory system requiring countless procedures and the long durations (Quinteiro et al., 2006). The fact that the independent states of Brazil are empowered with the ability to apply their own taxes is bound to present unknown challenges and unexpected costs. One of President Rouseff's key activities during her time in office has been to improve Brazil's business transparency to further encourage foreign investment. A lack of enforcement regimes and incentive has failed to motivate most Brazilian companies to be more forthcoming and transparent in their reporting (Borges et al., 2001). A lack of commitment or inappropriate use of IFRS tends to erode their usefulness to Brazil's corporations. The system of corruption has in the past shrouded truth. If IFRS are attentively applied their full benefit will be recognized and can assist the country in eliminating corrupt or questionable practices.

5.17 Multi-Agency in Brazil

Brazil falls under a classic multiagency model. Despite the government seizing control of several major industrial ventures in the 90s, they have generally operated more like a free market economy and those properties have since reverted back, though the government still owns a sizable portion and their influence cannot be truly known. The presentation a multiagency and Brazil is relatively easy to identify. A developing economy poise to be a major economic power, the fairly straightforward situation. Clearly investors demand transparency, especially given Brazil's history of scandal and questionable practices. Many of the larger listed companies sought to gain access to foreign capital by voluntarily adopting IFRS. Despite this fact, as they are generally considered label adopters, they may in fact be violating the sanctity of the agency relationship.

Investors should be aware that there is likely significant information asymmetry. From the side of the government, the situation is also very clear. The government seeks to grow GDP and further investment into the country's economy.

Requiring mandatory IFRS adoption for all listed companies was likely the best way for the government to encourage foreign investment, a mutual interest they share with the corporations. As enforcement is fairly weak and the regulatory structure is still being developed, this works to the benefit of both the government and the corporations. Furthermore in cases of scandal it is generally major political figures and corporate leaders involved. They both stand to benefit from the current conditions.

To further support the existence of the multi-agent relationship we can look to the research of Cardoso et al., (2008), whose research mentions three interesting theories that reinforce the multi-agent theory.

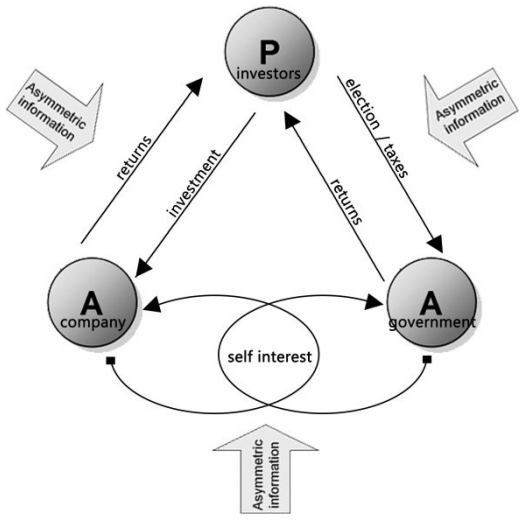


Figure 5.13: Standard Multi-Agency Model for Brazil

- The first of the theories is public interest theory which presents the viewpoint that" regulation takes care of public interest". It is akin to the state as a regulatory agency. This theory implicitly assumes incentives the regulators are lined to the public interest.
- Next is the interest group theory. This theory operates on the opposite side of the spectrum, assuming that I regulators main goal is to keep itself in power and thus regulation is designed to that end.
- The Haber mas' approach says big size closely held firms are proactive in their sins to avoid legislation and regulation for their own benefit (Cardoso et al., 2008).

In conjunction with the classic agency model between investors and companies, these three approaches establish a clear link that supports the validity of the multi-agent relationship and summation.

5.18 Game Theory, Moral Hazard and Asymmetric Risk in Brazil

The presence of game theory in the case of Brazil is relatively unquestionable. With the government's call for mandatory IFRS adoption supported by week enforcement and legislation has made it clear that their intention is to improve their own situation regardless of the other participants. The same could be said for the corporations involved. It's important to point out that not all corporations nor legislators are guilty of trying to mislead or misappropriate investor funds however the environment in total has the stigma of scandal, misrepresentation and self-interest.

The existence of moral hazard should be assumed if for no other real reason than investors need to protect themselves against those who would take advantage of the conditions. There are plenty of scandals which can clearly demonstrate parties entering into contracts agreement dishonestly or with misrepresented intent. As should also be assumed, the existence of asymmetric risk is unquestionable. Even under nearly perfect circumstances the existence of asymmetric information should be expected. In an environment where

regulation is poor, transparency is unreliable and legal regulation is varied investors must expect that some parties will engage in activities utilizing personal or inside knowledge without sharing with other parties.

5.19 Summary of Brazil

As is the case with most developing nations, Brazil's movement towards IFRS adoption was without doubt in their best interest. As they are not fully adhering to the intent of the standards the benefits they receive from IFRS adoption are likely to be varied. Additionally the current environment of Brazil given the major political scandals, the massive Olympic expenditure and the discontent of the impoverished peoples are very likely to have a detrimental impact on Brazil's long-term condition.

Unless the Brazilian regulators work steadfastly to enforce proper accounting regulation, even the limited gains obtained by a name adopter are likely to dry up in the country's reputation as a viable investment option may dry up with them. Brazil is poised to be a dominant global economy if they continue their pursuit of IFRS and eliminate corruption from the upper levels of government and company. The international community requires transparency and fair quality information and the more closely aligned with IFRS Brazil is, the better its future prospects.

Like India, Brazil should continue to enhance his educational systems and educate its accounting professionals and ethical business practices as well as the basics of accounting. It should therefore be a priority for Brazil to establish. Failure to pursue this course risks harming Brazil's future economic growth and alienating quality investors.

5.2 THE IMPACT OF IFRS IN A GLOBAL ECONOMY: US CASE

5.21 Introduction

The United States of America is a Democratic state controlled by elected officials. There are two largely recognized political parties that have to date filled most rolls of government unchallenged, the Republican Party and the Democratic Party. The country consists of the 50 continental United States and various other US territories throughout the world. By global regional standards the United States is an extremely young country. Nonetheless, it grew to be the world's most economically prosperous and politically powerful nation in the world. Though initially established as a British colony following the war of independence, which ended in 1783, the United States developed into a democracy affording the People's freedoms and rights unparalleled in human history beginning in 1788 with the signing of the Declaration of Independence (Conway, 2011).

By the middle of the 19th century, the United States had begun experiencing massive expansion and growth both in the population and the economy. Prior to the American Civil War, the country was prospering as an agricultural nation, however it is generally conceded that this good fortune was built on the foundation of a slave economy (Wright G., 2001). With the political upheaval and massive shock to the United States economy that followed the American Civil War, the nation was forced to build itself not on the reliance of slavery but rather on the reliance technology.

Between the 1890s in the early 1920s the country began to experience large bouts of growth is waves of company mergers occurred and further spurred innovation such as the Ford assembly line. But it was following the 1940s that really began to demonstrate the economic powerhouse that the United States would become. With the end of WWII and the consistent threat of the Cold War, American industry was polarized and society bent on continued economic success.

Like most developing industrious nations, America has been plagued by serious bouts of scandal and corruption which have prompted significant changes to political and fiscal regulatory policy. In the case of America this period of corruption was brought to light between 1990 and 2002 as federal prosecutors convicted more than 10,000 government officials of corrupt acts ranging from conflict of interest to campaign-finance violations and obstruction of justice (Saks and Glaeser, 2006). The difference between the corruption faced by the US and that of some less-developed nations, was the strong approach the US took to ratifying political change and reassuring the domestic and international investors. Today the United States hosts one of the most comprehensive and trustworthy systems of financial accounting available in the world. The country is generally considered to be a good source for investment as it has strong enforcement, a relatively trustworthy judiciary and a stable democracy. That said, the country faces radical challenges that threaten the very fabric of the country's constitution. Even now political and civil unrest within the country are increasing at an exponential rate. However, even under such strange circumstances the United States is likely to remain stable enough to remain a safe investment option and a dominant force on the world stage.

5.22 Historic Accounting in the US

Since the establishment of the United States and 1788, the country has developed at an exponential rate both politically and economically. This led to the necessity of a strong accounting basis which could be used for assisting and monitoring business practices. The research of James L. Chan has put forth that there were essentially three major waves of accounting reform within the United States. These waves had very specific purposes; the first insured financial integrity, the second supported law-based financial management and the third promoted accountability and transparency (Chan, 2001). His assertions can generally be considered accurate when looking at the milestones of governmental accounting mentioned in his research;

1921 Bureau of the Budget and General Accounting Office (GAO) - Budget and Accounting Act

1934 Securities and Exchange Act (SEC) – Governs the trading of securities

1937 Separation of the GAO's accounting and auditing functions - The Brownlow Committee

1950 Accrual accounting - Hoover Commission

1975 Governmental consolidated financial statements - accrual basis - Arthur Andersen & Co.

1976 Treasury Department begins issuing annual financial statements on the accrual basis.

1984 GAO requires audited agency statements on the accrual basis.

1986 Comptroller General endorses accruals and consolidated reporting.

1990 Chief Financial Officers Act requires audited agency-wide financial statements.

1991 Federal Accounting Standards Advisory Board (FASAB) is established.

1998 GAO begins auditing government-wide financial statements on the accrual basis.

2003 AICPA recognizes FASAB standards as GAAP after FASAB's restructuring.

As demonstrated, the US's commitment to accounting excellence has accelerated rapidly with ever-increasing commitment to quality, reliability and transparency. Perhaps one of the most significant moments in recent US accounting history is the implementation of the Sarbanes-Oxley Act (SOX), which was enacted in July 2002. This act essentially expanded the authority and responsibilities of the government auditing committee to oversee financial reporting and internal controls (Cohen et al., 2013). SOX were implemented as an almost direct response to the Enron scandal. It was a comprehensive reform of business practices specifically aimed at accounting and auditing. Enron was one of the world's largest energy companies based out of Texas. In 2001 the company bankrupted causing historic damage to investors, pensioners and the financial markets. As a result confidence in the US financial markets was deeply shaken (EY 2012).

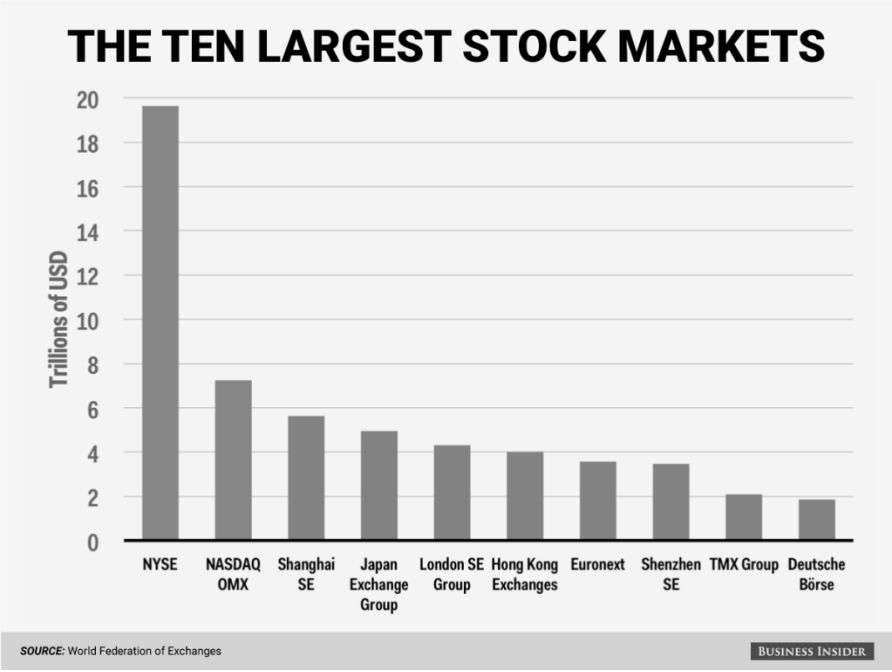


Figure 5.21: Global Stock Markets by size

As the country with the largest stock markets and the most investment in the world, the Enron scandal and the other lesser known scandals mandated a drastic action to reassure and rebuild investor confidence. As a result SOX provided a decisive response designed to enhance transparency, uphold executive accountability and protect investors. was put in place that rocked the countries financial markets. Several key elements of the Sox act have been replicated in other countries and accounting systems throughout the world (EY, 2012).

The financial crisis of 2008 lead to yet another piece of strong legislation in the United States; The Dodd-Frank Wall Street Reform and Consumer Protection act of 2010. The intent of the act;

"To promote the financial stability of the United States by improving accountability and transparency in the financial system, to end ''too big to fail'', to protect the American taxpayer by ending bailouts, to protect consumers from abusive financial services practices, and for other purposes (US GOV, 2010)."

5.23 IFRS Accounting in the US

Since the 2002 I SAB memorandum, professionals from the best accounting systems in the world have been working together to present a unified standard that's globally acceptable. The US has repeatedly reaffirmed its commitment to the advancement of unified standards, however, actual movement towards the adoption of IFRS has been little more than words at this point has there's been no official movement towards that end. The SEC, who is responsible for the protections of investors, has stressed the need of high quality accounting standards to meet the needs of a global marketplace.

Fosbre et al., have pointed out the fact that trade agreements such as NAFTA the current TPP have thrown open the doors for cross-border financial investment. With these reduced barriers it's become far easier for companies to become a multinationals (Fosbre et al., 2009). In many cases the majority of earnings for these multinationals are coming from abroad thereby complicating the reporting process and distorting the understanding of investors. While the US continues to resist adopting IFRS, according to the I SAB nearly 33% of the market capitalization is now represented by IFRS as opposed to the 35% made up by US GAAP (Fosbre et al., 2009). It is unquestionable that IFRS for their converged partners are quickly overtaking US gap as the primary means of financial accounting and is already utilized in more than 150 countries.

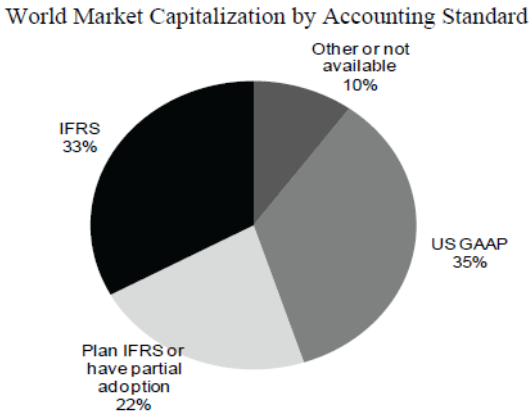


Figure 5.22: World Capitalization by Accounting Standard

There is no question that IFRS use has increased dramatically in recent years. The research of various academics has shown the potential of IFRS to improve the function of capital markets and facilitate economic progress. The US even allows for IFRS reporting for non-US firms traded in US markets (Harris et al., 2013). US gap is already a very high quality accounting standard. It is generally considered equivalent for IFRS reporting. As IFRS are as yet still in the proving phases, it is somewhat understandable that the US is not made an official move towards convergence. As a country with the largest stock markets and companies, the US stands to be greatly impacted by regulatory changes mandated by IFRS. It is understandable that those in leadership roles within the accounting community should want to verify just what impacts can be expected. Furthermore there is the fact that even the IASB president has acknowledged that adoption of IFRS necessitates the forfeiture of some sovereign rights in regard to financial standard setting, a suggestion Americans inherently rebel against. All of this is not to say that the US is not accommodating to IFRS. In truth they accept IFRS reporting from all foreign filers.

There are some additional considerations that may play a role in the American accounting professions resistance to IFRS. The US is a highly regulated market with severe litigation liability. US GAAP covers most any condition that can arise. The standards have been well laid out and thoroughly thought through to allow for any scenario. This is a valid protection for accountants operating in the US. The shift IFRS may in fact strip them of some of their protections leaving them vulnerable to litigation.

The more probable reason for the US is slow progress towards convergence remains in the political arena. As previously mentioned, America is not prone to giving up authority to foreign entities. This stance is not without justification as it is the responsibility of the US government and its entities to see to the well-being of US citizens and investors. Foreign entities though operating for the good of all investors do not put the interests of American investors first. The SEC has reported on numerous occasions that IFRS are not strict enough, not consistent enough and allow far too much leeway in their reporting options. US GAAP being highly tested and vetted accounting framework has established common practices and precedents for dealing with most situations.

5.24 Contentions between IFRS and US GAAP

- **REVENUE RECOGNITION**: IFRS recognizes revenue only when risks and rewards of ownership have been transferred and the buyer has control of the goods, he can then be assumed that the economic benefits will reach the company. US GAAP requires delivery have occurred and that persuasive evidence of an arrangement for the transfer and collectability has been reasonably assured.

- **EARNINGS PER SHARE (EPS):** under US GAAP shares may be settled in shares or cash at the issuer's option. The default assumption is that shares will be issued a less clear evidence is been provided to the contrary whereas under IFRS they are always considered to be settled in shares. Under US GAAP, for year-to-date and annual computations when each period is profitable, the number of incremental shares added to the denominator is the weighted average of the incremental shares that were added to the denominator in each of the quarterly computations. IFRS on the other hand state whether the period is profitable or not, the number of incremental shares is computed as if the entire year-to-date period were "the period" (that is, do not average the current quarter with each of the prior quarters).

- **INVENTORY**: LIFO is prohibited under IFRS and the same cost formula must be applied to all inventories similar in nature has opposed to US GAAP which allows the LIFO method and the consistent cost formula without mandating nature.

- **LEASING**: US GAAP allows land and buildings transferred via lease to be classified as capital leases regardless of the relative value of land. Additionally, unlike US GAAP which states if only a small part of the use for an asset is sold, gains and losses may be deferred or amortized over time, IFRS mandates immediate recognition subject to the difference between the cell value and the fair value

- **TAXES**: US GAAP requires taxes paid on intercompany profits to be deferred and prohibits the recognition of deferred taxes on temporary differences between the tax bases of assets transferred between entities/tax jurisdictions that remain within the consolidated group. IFRS on the other hand requires taxes paid on intercompany profits to be recognized as incurred and requires the recognition of deferred taxes on temporary differences between the tax bases of assets transferred between entities/tax jurisdictions that remain within the consolidated group.

- **BENEFITS**: IFRS mandates a projected unit credit method be used in all cases whereas US GAAP differentiates on which method is used depending on the characteristics of the benefit plan. Furthermore calculating the return on the asset is limited to the net interest calculated using the benefit obligations discount rate under IFRS whereas fair value of plan assets or smoothed calculated value can be used to control market fluctuations under US GAAP (EY-2 2013).

5.25 Reporting Quality

For more than 80 years US GAAP has been established high-uality set of standard utilized globally by investors to access information about capital markets. They are extremely high quality and have a high degree of trust already associated with them. Though it is already been proven conclusively that IFRS are indeed high-quality set standards, it's vital to reassert the fact that given the leeway provided by IFRS reporting may be inconsistent and variable. A single set of high quality standards will still be implemented in various ways among different firms, industries and jurisdictions (Gnananarajah, 2015).

While it may be argued that claims about US GAAP providing higher quality statements, than IAS-based statements, are false they must again point to the consistency. US GAAP does in fact utilize well-

established precedents specific to conditional circumstances. It cannot be argued for contested, if you meet certain conditions you must utilize certain methods.

With that in mind, the research of Barth et al., and various other researchers has shown by their research that US GAAP does not present higher quality standards than those of IFRS. They suggest in fact that the differences between the two are somewhat negligible (Barth et al., 2012). Regardless of which standard is ultimately utilized for US financial reporting, the information quality should be equivalent

5.26 Reporting Reliability

Reliable, consistent and uniform financial standards are a vital part of corporate governance and a keystone to maintaining investor confidence. The environment of U.S. accounting can be somewhat confusing however the historic precedent of US GAAP for various standards and their utilization ensures reliability in U.S. reporting. Even from an international perspective US GAAP is considered to be a reliable standard due to the strong enforcement utilized within its borders. Few countries chasten prosecute corporate criminals as stringently as United States. Essentially the effects of the SOX act have turned accountants and auditors into regulatory policeman. The prospects of error and the severe punishments that man Sue act as strong deterrence for any divergence or improper accounting practices. Though the United States has not adopted IFRS, their high quality accounting standards are known to be a reliable source of information for investors and information users. The somewhat inflexible nature of their development and rule of law precedent setting makes them easier to use in anticipating outcomes. While the global economy genuinely believes that the movement towards IFRS is a step towards improving the reliability of accounting information, it would be difficult to argue that U.S. companies are not already presenting reliably accurate information.

5.27 Reporting Transparency

Since the earliest founding's of the American accounting system, the goal has been to insure financial integrity, support law-based financial management and enhance accountability and transparency (Chan J.L., 2001). United States of America has consistently demonstrated efforts towards the scent. The easing of regulations which led to the collapse of Enron helped fuel the subsequent financial crisis of 2008 were a stinging reminder that financial reporting and transparency is vital. The knowledge of this is likely why the government regulation that followed was so harsh in the eyes of corporate management. The SOX act, as previously mentioned, was a harsh wake-up call to the business leade and in rs of US corporations and a warning to all future firms domestic or multinational to engage in fair practices, present timely accurate data and act with at least some moniker of accounting conservatism .

5.28 Multi-Agency in the US

The US investment market is a prime example of a multiagency relationship. The triangular system set up in the multi-agent model represented by the investors, the corporations and the government and SEC represent the very strong example of what we should expect to see in a proper multi-agency relationship. That is not to say that the relationship is perfect as the model itself allows for information asymmetry and moral hazard cannot be accounted for. The problem presented by The U.S. is that by its very Constitution it is a democratic state however as mentioned in previous sections of this paper, from the earliest days of independence the governmental leadership has opted to pursue socialist ideals. The state took on the role of attempting to spur high growth rate while relying on domestic industry to build up local development. It was expected that the benefits of a high growth rate would roll down to the poverty-stricken lower-class increasing their savings and enable them to invest. Unfortunately this proved hugely unsuccessful.

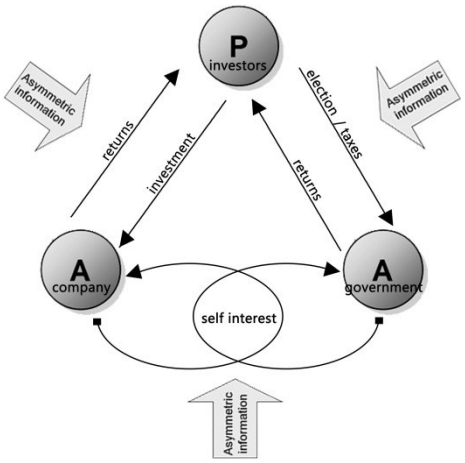


Figure 5.23: Standard Multi-Agency Model for the US

The U.S.'s legal system has forged strong public sector and investor protections. Proper systems for relatively quick dispute resolution are in place and the government actively pursues corruption and ever improving transparency for investors makes. The companies provide the data in accordance with the demands of the investors and at the quality demanded of both the investors and the government. Meanwhile the government works to protect the interests of companies from foreign competition and unfair business practices, competitors and even nations if you look at the response to the "North Korean" attack on Sony pictures U.S. All the visible connections for a multi-agent relationship exist there.

5.29 Game Theory, Moral Hazard and Asymmetric Risk in the US

US government and corporations are absolutely no stranger to game theory. Has one of the top global superpowers in the world the US has over the decades experienced times of strife and contention with other superpowers. Such times often involve power plays. Such examples can even be found in modern day with the actions of Russia and Crimea and Syria. In regards the corporations, US companies of the top

multinationals in the world they've been engaged in global trade and competition since the beginning of modern times. In both the case of government and companies moral hazard is not without precedent take for example circumstances of North Korea or Iran. Both enter into agreements with the G-7 in exchange for things they need for an order to have sanctions removed only to turn around and go back on the agreement after they've received what they sought. Common sense suggests that it should be easy to recognize that if they've done it multiple times they'll do it again and yet the governments of the G-7 and other nations often extend good will and the hopes that this time things will be different. The US is also been guilty of such actions in the past, breaking agreements when it found itself in a position to safely do so. I would venture to say that at the national level engaging in moral hazard activities is a judgment call on whether you can avoid or injure the repercussions of your actions. At the corporate level it's much more difficult to engage in sex actions in the US has strong investor protections can ruin a company. That is not to say that companies do not engage in such activities. They simply must be careful about where they engage such practices likely against foreign entities where enforcement may be more limited.

As pointed out earlier in this paper, The U.S.'s past though not clear of corruption has certainly been infused with strong moves towards honesty, reliability and transparency. Especially in current times, the US corporate culture makes clear that engaging in unfair business practices carries heavy consequences and that avoiding them is near impossible. The existence of information asymmetry is still viable as the level of disclosure on certain information cannot necessarily be regulated. If a company learns information it may be morally obligated to share it however it is not likely legally obligated to do so and therefore may not.

While IFRS may not be necessary for the purposes of financial transparency we have to question the US government's lack of commitment to adoption at some level. Adoption of IFRS would certainly be to the advantage of investors around the world, companies seeking access to foreign capital markets and overall global standardization. It may not however be in the interest of the government. The government makes the case, which is certainly valid, that IFRS may not be in the best interest of investors. But we must question whether that's truly the case the weather it may not be in the best interest of the government. As previously

noted, the full effects of IFRS implementation on the largest economy, with the most listed companies and largest stock exchanges cannot be readily identified. It's entirely possible that IFRS would have negative impacting effects that cannot be foreseen and could potentially cost the government sovereign controls and revenues.

5.210 Summary – The US

While the US certainly seems dedicated to the implementation of a set of unified global accounting standards and are happy to allow their use by foreign entities operating within the US markets, they show no immediate intention of adopting them for use by US companies. On the other hand, IFRS are gaining such momentum that the US may find itself left with no recourse but to adopt IFRS in the future. Resistance to join international community under one harmonized set of standards may potentially have backlash against multinational US companies operating abroad. While it is unlikely that US GAAP will be deemed unfit for financial reporting in the foreseeable future, is entirely possible that investors abroad may come to regard IFRS as a benchmark for a worthy investment and lack of its use as a deterrent to investment. There certainly somewhat irreconcilable differences between the current state of IFRS standards and US GAAP practices. If the US is to be brought into the fold of IFRS adopters it is essential that these differences be eliminated or proven insignificant to US interests. In one respect it is a necessity that IFRS implementation be initiated in the US. Only then under the circumstances of such varied large-scale corporate activity and trading can IFRS be significantly vetted and improved to the benefit of the international community. The US will no doubt continue to play a significant role in the development of IFRS in the future and in the process perhaps move closer towards adoption themselves. The U.S. continues to grow in the international community and the demand for transparent and fair quality information continues to insert its own pressures, it is likely that U.S. accounting will continue to evolve and more closely aligned with IFRS as put forth by IASB.

CHAPTER 6: IFRS IN A GLOBAL ECONOMY: EUROPE

6.1 THE IMPACT OF IFRS IN A GLOBAL ECONOMY: EU CASE

6.2 Introduction to the European Union

Unlike in previous chapters where the various accounting jurisdictions required extensive self-analysis, the case of the EU is better presented in concert for a number of reasons. Historically speaking, a number of members within the EU have been enemies at one time or another. It is quite possible, that the birth of the EU began in 1951 with the European coal and steel community (ECSC) treaty. Under that treaty, France, Germany, Italy and other countries gave up a measure of national sovereignty to international institution thus beginning the economic, political and social integration of Europe (Carolan B, 2009).

Though the four members from this sample; France, Germany, Italy and the UK, all adopted IFRS in 2002, historically they have extremely varied forms of accounting based on their social, economic and political needs. As such extensive reforms to the field of accounting had to be implemented in order to permit these nations to adapt the system of accounting standards intended for international use. Prior to the adoption of IFRS, varied forms of cash basis and accrual basis accounting were being utilized throughout the EU membership, evolved from their basic form by the influence financial information users in each jurisdiction, i.e. the lenders and the regulators. These bureaucratic hurdles and lack of comparable information hindered to the efficiency of member nations. The lack of unification prevented any true measure of transparency and made accountability very difficult to enforce (Pina et al., 2009).

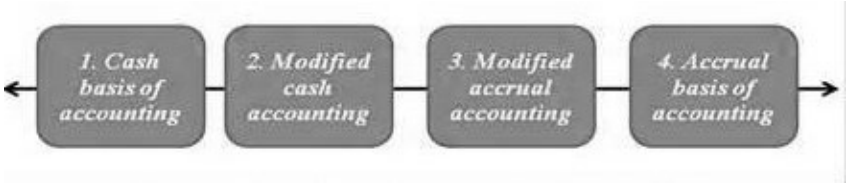


Figure 6.1: Standard Methods of Accounting in the EU

Research performed by Lüder, (1992), identified numerous barriers to the implementation of accounting standards which help to explain some of the complexity faced by the EU. She listed three primary barriers, those being; the legal system, qualification of accounting staff and size of the jurisdiction. In regards to legal system, she points out the existence of two primary systems; The "civil law" system which tends to be rigid and inflexible, highly detailed law. Two examples that fall under this category include France and Germany. The second type is "common law" systems, utilized by countries such as the United Kingdom and the United States. These legal system influences the flexibility of accounting regulation. The tendency is for common-law countries to be more flexible and open to change while the inflexibility of Civil law countries if an impediment to it (Lüder, 1992). The second barrier to the implementation of accounting standards is qualification of accountancy staff. In some countries the accountancy field is dominated by specialists trained specifically in private or public sector accounting while other jurisdictions lack professional accountants and auditors and/or are untrained and even some of the most basic general skills. This situation cannot be resolved in the short term which may endanger any attempts to implement new regulations for concepts (Lüder, 1992). Finally, she highlights size of the jurisdiction expressed by means of population size and the number of government agencies. Increased size increases technical and administrative challenges. Additionally, the larger the size of the jurisdiction, the higher the cost of implementation is. This provides evidence as to why innovation is more frequently seen in smaller jurisdictions (Lüder, 1992).

Approaches to financial management throughout the EU have generally been influenced by cultural and historical traditions and precedents. France and Italy for example, have evolved in a manner that respect for bureaucracy and legislative procedures is paramount, sometimes contrary to economic sense (Pina and Torress, 2003). Germany on the other hand, with its socialist history had developed a system concerned with meetings society's needs (Sanderson, 2001). Finally you have the UK, which was traditionally driven by markets and trade as it expanded the British Empire across the world. In all instances, the method and manner in which financial reporting was implemented at the various levels of government, was affected by the traditions and activities of each jurisdiction to meet their needs.

In modern times, the global shift towards IFRS has strongly influenced the shape and design of accounting practices of the EU membership, however at the same time, Europe has been the predominate influence on the developing IFRS as the membership body tries to merge the best practices of 28 independent states (Ding et al., 2007). In conjunction with the development and spread of IFRS, the local accounting systems within each jurisdiction have also had a great opportunity to reinvent themselves to increase domestic efficiency while taking advantage of the quality demonstrated by IFRS. At present the application of IFRS is mandatory solely for the consolidated financial statements of publically listed companies within EU Member States. Other companies within the EU have the option to apply IFRS in their consolidated financial statements however local GAAP is generally still required for statutory filings.

6.3 Historic Accounting in the UK

The Treaty of Rome signed in 1957 helps form the basis of the evolution of accounting in the UK. It stated four inherent freedoms; the free movement of goods, capital, people and services. In short, persons may settle and start up new enterprises wherever they wish, applying the national laws of the country of settlement (Beke, 2012). Harmonization first began in the 1970's and 1980's. Insuring the fore mentioned freedoms necessitated transparency and accuracy for accounting data. The obligation of financial reporting (Profit and Loss Account, Balance Sheet) and auditing helped the shareholders and stakeholders in decision making, and protecting their interests (Beke, 2012).

Though initially a cash-accounting system, starting in 1990's the UK began its pursuit of accrual-accounting for both for the budgeting and financial reporting. Accrual accounting recognizes transactions as the underlying economic events occur, regardless of the timing of the related cash receipts and payments, contrasting with cash-accounting basis under which revenues and expenditures are recognized when cash is received and paid respectively. The importance of this shift comes in that unlike cash-basis which can only tell you how much physical capital is available, accrual-basis serves the macroeconomic purpose of measuring assets and liabilities that are relevant to the overall stance of fiscal policy and fiscal sustainability,

but which are not measured by cash accounting (Mayes and Khan, 2009). In short, it measures the overall health of the entity. The accounting system of the United Kingdom is now based wholly on accrual accounting and entities pay much closer attention their investor reports rather than the budget sheets that serve management. This has aided considerably in increasing the transparency and understandability of the public accounts and facilitated the shift to IFRS.

6.4 Historic Accounting in Germany

Like the UK, Germany was initially a cash basis accounting country however in recent years moves have been being made towards accrual basis accounting. At the local level of government, reforms towards accrual accounting have implemented. At the federal level there was resistance to shifting to accrual accounting as there was insignificant support at the state level (Jagalla et al, 2011). Even within Germany, public accounting accrual accounting approaches varied between jurisdictions in terms of recognition, measurement and disclosure (Glöckner, 2009). Accounting reforms enhanced transparency and accountability and established a form of internal harmonization (Wirtz, 2010). Germany's full regulatory adoption of accrual-basis accounting came in 2104.

Like most nations, Germany maintains a national GAAP and IFRS have had a strong influence on German statutory accountancy and filing under German GAAP. The recent historic reform of German GAAP, also known as BilMoG, was the most significant alteration to the system in recent history (PWC 2010). The goal was to establish less complex accounting principles that were in equivalent alternative to IFRS and at the same time enhance the transparency and quality of the information presented with German GAAP by implementing elements similar to IFRS. While the revisions enhanced disclosure of information by decreasing differences in certain areas, it increases or changed them in other areas (PWC 2010).

The wide range of literature on the topic suggests that even though German GAAP is very similar in scope and application, there may be substantial differences in the application that might present substantially different information and financial reporting. Nonetheless, Germany is definitely moving towards a more

transparent method of reporting even at the domestic level. This will enhance the quality of overall business within the country as well as familiarizing inexperienced accountants with the same kind of reporting conditions that they'll face outside of their national boundaries while at the same time allowing the country to enhance their reporting and contribute back to the international accounting standards Board to enhance the overall effectiveness of IFRS.

6.5 Historic Accounting in Italy

The modern history of accounting reform in Italy can probably be traced back to the French Revolution and Napoleon's expansion into Italy from 1796 to 1815 (Maran and Bracci, 2010). This period marked both political and administrative change specifically in the area of public administration. The legitimacy of Napoleon's control was based on satisfaction of society's needs, also as you may recall from above referred to as civil law. It was with the coming of Napoleon that accounting and control innovations made their way into Italy (Maran and Bracci, 2010).

Elements of Napoleon's occupations still extend into modern times. Similar to the US and Germany, Italy is also a three-part government divided up into state, region municipalities and local authority. It was under Napoleon's influence that municipalities, that largest representation of administration in Italy, came into being. Other elements of Napoleon's influence are also present. For example, legislative bodies of accounting standards have only advisory role, the development of accounting principles is left to the public sector, such as the Observatory for finance and accounts of Local Governments (Giovanelli, 2006).

The principal features of the last reform are the harmonization of public accounts, the transition to cash accounting. The accounting system of the regions, similar to the state accounting system, is based on a modified cash basis, with financial statements prepared in accrual and cash basis however each region, according with the Constitution, has determined its own role and created a stream of information which is not comparable (Borgonovi, 2005).

Budgetary controls were introduced to France in the 1930s and consisted of forecast comparisons and performance reviews. This included having professionals in professional organizations review information forcing the new awareness on French firms. The budgetary controls made their way into firms and from there were used to formulate reliable forecasts and create stable environments (Berland and Boyns, 2002)

6.6 Historic Accounting in France

Just as in the case of Italy, the Pulliam played a key role in the establishment of historic accounting in France. He applied similar practices in seeking the fulfillment of society's needs. One approach taken by Napoleon was to explore the role of accounting and make power control chain calculable and visible (Maran and Bracii, 2010). In short his goal was to make understanding how the government's power worked, what they provided, how much of it they provided and how they provided it easily understood to the general populace.

According to Marcan and Bracci (2010), historical scholars believe that it was during this period of Napoleon dominance that state accounting separated from double entry bookkeeping and traditional accounting as a whole. From there it is suggested, double-entry bookkeeping developed into the private sector of accounting and became more of a social science traditional accounting remained tied to specific needs control.

The origins of accounting education in France date back to the 17th century when bookkeeping was mandated for commercial activity. It was from this mandate that the development of the bookkeeping profession originated in France. The first schools for the method opened. It wasn't until the late 1800s and that a school of higher education in commerce was established, tasked with filling in the education gap between bookkeepers and accountants.

The French government was set up as a presidential republic with a number of centralized administrative institutions referred to as; State, Departments, Regions and Local governments. As mentioned above the French legal system is categorized as a civil law system and that inflexibility has influenced the accounting system thoroughly, especially in regards to business. In modern history the government has made

moves toward decentralization introducing the dual system of accounting. Modified cash basis accounting must be utilized for budget reporting, however, accrual accounting has been implemented for the purpose of improving economic appeal by presenting more investor centered results. Like Italy, French standard setters, advise on which standards should be implemented from the public sector and indicate which accounting principles should be adapted.

Box 1. Accounting Basis for Annual Financial Statements

	Full Cash Basis	Combination of Cash and Accrual basis	Full Accrual Basis[1]
Australia			X
Austria	X		
Belgium	X		
Cambodia		X	
Canada			X
Colombia			X
Czech Republic	X		
Finland		X	
France			X
Germany			X
Greece	X		
Hungary	X		
Iceland		X	
Indonesia		X	
Ireland		X	
Israel		X	
Jordan		X	
Kenya	X		
Mexico		X	
Morocco	X		
Netherlands	X		
New Zealand			X
Norway	X		
Slovak Republic	X		
Slovenia	X		
Suriname	X		
Sweden		X	
Turkey	X		
United Kingdom			X
United States			X

Source: Data selected from OECD/World Bank Budget Practices and Procedures Database, updated by current information where available.

Figure 6.2: The Accounting Basis for EU and other Countries.

6.7 IFRS Accounting in the EU

As mentioned previously in this chapter, the creation of the EU and ultimately the establishment of a common set of accounting standards such as IFRS, resulted from the needs of a large economic body in this case the EU to have functional and high quality accounting standards in which to uphold the freedom to move capital, people, goods and services across wide swaths of land and between various national economic bodies. The aforementioned agreement between Germany, France and Italy necessitated the surrender certain sovereign rights however the economic gain each experienced offset the decision. The EU at present has 28 bodies, each with their own territories, citizens, businesses and services. As has it been established in the previous section they also have varied methods of accounting and financial reporting. The logistics alone of working in so many different jurisdictions would act as a huge barrier to anyone trying to analyze and compare data. Fortunately the various bodies of the EU recognized the need for a common set of standards. Though IFRS are generally mandated for publicly listed companies, they have often been permitted for use by smaller organizations as well. Additionally the various jurisdictions have taken this opportunity to enhance their accounting standards and will closely align them with high quality standards developed by the IASB.

With the joint EU approval in 2002 of the EU regulation number 1606/2002 which mandated all listed companies in the EU report under IFRS for consolidated financial statements, as of 2005, that threw open the doors for IFRS acceptance internationally. Just as with local GAAPs, implementation choice under IFRS is often influenced by traditional accounting systems. Though it is true that IFRS standards may be overcomplicated for simple non-listed companies, however another likely reason they are permitted to continue the use of GAAP is the cultural historic connection. This historic connection to traditions is an example that was demonstrated to every potential IFRS adopter and jurisdiction currently adopting IFRS.

Unfortunately, that lack of commitment to enforce IFRS across all entities within the jurisdictions has set a dangerous precedent and complicated the chances of full incorporation in the future. Additionally, it may be the very fact that the EU nations did not fully commit to IFRS implementation that spurs so many countries towards convergence as opposed to adoption. I guess you might say it's akin to a weed plant. If you

just pull off the top half it will persist and grow again. However, if you pull it out at the roots you may successfully remove it and prevent further hassles. Furthermore, maintaining two sets of accounting standards has also acted as a crutch for governing bodies. Their uncertainty about the full effects of IFRS implementation and the possibility of negative effects on tax revenues has proven their reluctance to fully commit IFRS adoption. Though it's true that the local GAAP in IFRS framework coexist quite harmoniously it still presents challenges for the future of IFRS accounting.

6.8 Reporting Quality

Quality of any set of accounting standards is derived not solely from the standards themselves but rather from the preparers, the regulation and enforcement. Even these do not solely dictate the quality of the standard as there are many factors to consider. If we go by the standard that quality is the ability of investors to gain useful quality data in a timely manner then there is no doubt that IFRS standards are quality. The EU countries covered in this study also have a history of providing high quality standards via local GAAP. IFRS up and mandatory in the EU for over a decade and extensive research and vetting is been done in the standards. The quality of the standards is always held in high esteem and the EU countries in the study are all considered among the top economies in the world.

Researchers such as Ball (2006) and Zeff (2007) have also made valid points that speak to the quality of IFRS. Ball (2006) states IFRS have been shown to provide more accurate, comprehensive and timely financial statement information, relative to the national standards they replace for public financial reporting in most of the countries adopting them, Continental Europe included. While Zeff (2007) points out that assuring a good system of investor protection and property rights is as important as adopting quality accounting standards. Different business, accounting, auditing and regulatory cultures may prevent the convergence of accounting systems towards a common, high quality, level.

6.9 Reporting Reliability in the EU

Reliable, consistent and uniform financial standards are a vital part of corporate governance and a keystone to maintaining investor confidence. The historic precedent for accounting reliability of the four EU members of this study certainly demonstrates highly reliable interaction. Financial statement preparers are being open and forthcoming with data and presenting it in an understandable and clear manner that investors find easy to utilize and depend on.

6.10 Reporting Transparency in the EU

When determining whether IFRS adoption has brought greater transparency, it's important to point out that transparency cannot specifically be quantified. That said, he can be analyzed by assessing the results of forecasting, stock returns, risk assessments and other such factors. Generally speaking the research of most of the economics of most of the academic bodies has pointed towards IFRS as being transparent in its ability to provide quality data quickly and accurately. That is, an improvement over the financial information provided by former domestic GAAPs. Obviously the ability to understand improves your ability to forecast and so on. The word 'transparency' is quite broadly defined, however, it is appropriate to regard improvements in recognition and understanding as improvements in transparency. We should also acknowledge however that improved transparency will not necessarily lead to improved forecasting for any other positive result. Conversely, poor results are not necessarily an indication of poor transparency and as such should be considered carefully before classifying it one way or the other.

One measure that might be used to determine transparency is looking at that school behavior of the business leaders and government officials from EU member states. If both companies and government show in tolerance for unethical behavior and the behavior of officials can be monitored and measured than we

might also say there is a good level of transparency available. During its tenure implementing and improving IFRS the EU nation-states have enjoyed significant capital market access and foreign investment. On this note we could surmise that the standards are of a high quality and that investors feel comfortable with the information they've been presented with. You

6.11 Multi-Agency in the EU

Tin the case of the EU, it would be entirely possible do a multi-agency assessment for each of the member countries in the study, however, we can shorten the analysis by looking at some very specific facts. First of all, the UK, France, Germany and Italy are all recognized democracies that elect their representatives to office. This is one of the clearest indicators of a standard multiagency relationship. Again, as the principal, the investors are responsible for electing their officials by their vote and paying their taxes to the government. As one of the primary agents, the government is responsible for providing fort citizenry, making and upholding good statutory regulations and protecting the welfare and rights of the people be it everyday life or investment.

On the other side of the multiagency triangle, we're presented with the investor again as the principal and the company as the agent. Investors invest their funds to the companies utilizing financial information presented by the company expecting a fair return. Companies receive investment and work in the best interest of the stakeholders, which will often but not always be working in the best interest of the company itself. As all of these countries have strong economies, well-established companies and a strong stock market presence, it's fair to say that they are upholding their end to the investors; else they would be failing companies.

Finally there's the third side of the multiagency triangle which involves the two agents and their competing interests. This relationship is without question functioning well within these nations as many of them are currently engaged in litigation with giant corporations. Though the corporations were acting in the interest of themselves and the investor trying to limit taxation and maximize revenue and profit, this directly competes with the interest of the government whose job it is to collect tax revenue for the purpose of operating the government. Examples include the UK's pursuit up Google, Apple and Amazon for billions of

dollars in lost revenue. This clearly demonstrates the existence of self-interest, information asymmetry and the failure and the agency relationship. Without the proper balance between the investors, the companies and government it is impossible to proceed in prosperous manner. Is it in the best interest of the company and the investors for the company pay less tax, of course? Is it in the interest of the investor if the government chases down tax revenue and charges penalties against the company, unquestionably not.

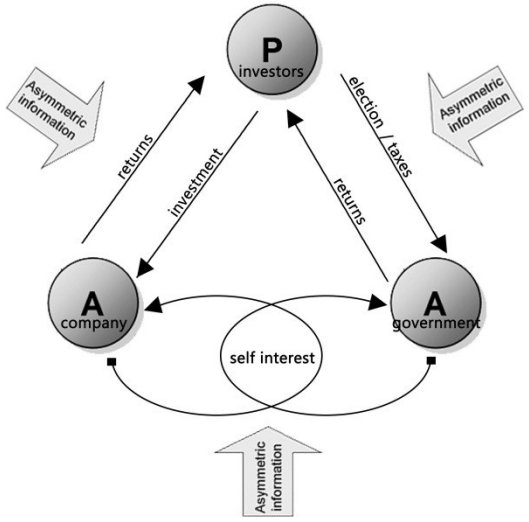


Figure 6.3: Standard Multi-Agency for the EU

That said, the government is not acting improperly. His acting in the proper function of the government trying to obtain the funds in the proper way to operate normally it is a nonprofit venture. In the case of EU countries, there are strong investor protections provided by the government. The government and enforcement agencies pursue and administer proper punishment for inappropriate activity. They're serving the role providing their returns to the investor. Governments also provide this same benefit to companies in regards to other nations and/or improper trading by employees. Again the government is doing its job and working in the overlapping self-interest shared by both the government and companies

Providing further evidence that supports the claim is the fact that most corporations are not state run, there is a clear disassociation between corporate and government interests which acts as a strong protection

for investors. The civil and common law legal systems found within the UK, Germany, France and Italy are the ideal system to have in place for a proper multiagency relationship. As such I ascertained that a strong and well-functioning multiagency relationship exists in EU countries.

6.12 Game Theory, Moral Hazard and Asymmetric Risk in the EU

All four of the EU member states covered in this study have been involved in extensive bouts of game theory and moral hazard at one time or another. Many of them used to operate as enemies thereby necessitating deceit and misleading activities. That said, this does not seem to be the case in relation to accounting and finance. All of the countries covered in this chapter have well-established economies, legal systems and investor protections already in place and have no need to deceive or misrepresents via moral hazard. That is not to say such activities do not take place, or may not take place in the future however, generally speaking the success of these nations is heavily dependent on their reliability and trustworthiness. To break that relationship would be extremely detrimental to their welfare. The same can mostly be said for companies operating within the EU. The number of accounting and political scandals to have occurred in recent history is insubstantial and compared to the past and other nation states. EU countries are keen to maintain their access to foreign capital for the purposes of maintaining growth and bettering the circumstances of the EU people. These nations do not face the scrutiny and I are that country such as Russia and China are forced to endure. Furthermore as the developers and forefront representatives of IFRS accounting standards, there upheld to higher scrutiny in their practices than other countries and companies. It is essential that they put forth their most disciplined and ethical behavior as a model example to those who wish to join their system. They must be as transparent and forthcoming as possible for those who would emulate. Otherwise, they prove that IFRS is little more than a smokescreen as opposed to the accounting revolution it has the potential to be.

6.13 Summary – the EU

The EU's IFRS rollout over a decade ago has without a question been in the best interest of the international community. They have demonstrated the benefits to trade having a unified set of accounting standards and common understanding of how to implement them. As proof of their success, you can see the widespread adoption and convergence of IFRS in over 160 countries. It is still unlikely that all of the benefits and or consequences have yet to be identified. As time passes we can expect to see increased unity among the EU member states and closer adherence to the unified set of standards. At present there still a strong influence of domestic GAAP. Unfortunately due to the failure of EU countries to implement IFRS as standard across all levels of accounting, local GAAPs will continue to fan debate and bring into doubt the full commitment of the EU membership to a single unified set of accounting standards. It is likely that standard setters will continue to push for full implementation however; there is no end to that debate in the foreseeable future.

Nevertheless, has previously pointed out the current arrangement is working satisfactorily and investors are not displeased with the quality of the data, the transparency of the companies for the regulation of the government. It may come to pass that as investors become more accustomed to IFRS and it continues to spread more widely around the world, that eventually investors may demand IFRS as a requisite for investments or trustworthiness. It is very likely that the continued success of IFRS and growing popularity will have an adverse effect on US GAAP. It is unlikely that they will impact US GAAP sufficiently enough to force the US to adopt on their own. But, there continued success will impart pressure upon the US to comply with international demands and/or risk losing investment from a broad and their quality reputation.

One step that should be taken in the near future is to closely analyze the EU nations tax reporting systems. If full IFRS implementation is truly the goal, then full implementation for both listed and unlisted companies as well as use as a tax base is essential. The adoption of IFRS has a high set of quality standards intended to eliminate excessive and outdated reporting and unify the world under one standard necessitates inclusion of a tax code based on IFRS. Without that, it is impossible to eliminate domestic GAAP which will leave us at a crossroads indefinitely. While all of the EU nations already possess high quality schools of

business that teach accounting and ethics, most countries have not as of yet began implementing strong educational reform to include IFRS training. Prior research has shown most accountants to be middle-aged or older and unfamiliar with the newer standards and how to properly apply and deal with them. It is essential to begin training the next generation of accountants and instilling in them understanding of the proper spirit of application as well as the core knowledge about IFRS. Such activity will likely take place at the tertiary level of universities. While some schools do offer a course or two in IFRS accounting there is as of yet insufficient educational literature developed to adequately impart the subject matter.

CHAPTER 7: THE IMPACT OF IFRS ON GDP AND FDI FIGURES

7.1 Section Description

The purpose of this section is to comprehensively analyze development indicators obtained from the World Bank databank system. By analyzing figures such as GDP, GNI, government consumption expenditures, tax revenues and foreign direct investment during the years in and around IFRS adoption we can game some moniker of insight as to what affect IFRS may be playing in the macroeconomic field. This section analyzes the top 10 economies in the world. It covers three major regions; the Americas, Europe and Asia. The sample economies were selected based on the 2012 GDP ranking. The covered included in the study include the US, China, Japan, Germany, France, the UK, Brazil, Russia and India. Utilizing the information previously discussed when evaluating the historical, cultural and societal influences on their domestic GAAPs we can gain understanding as to why a IFRS are implemented, or not, in what manner and for what reason.

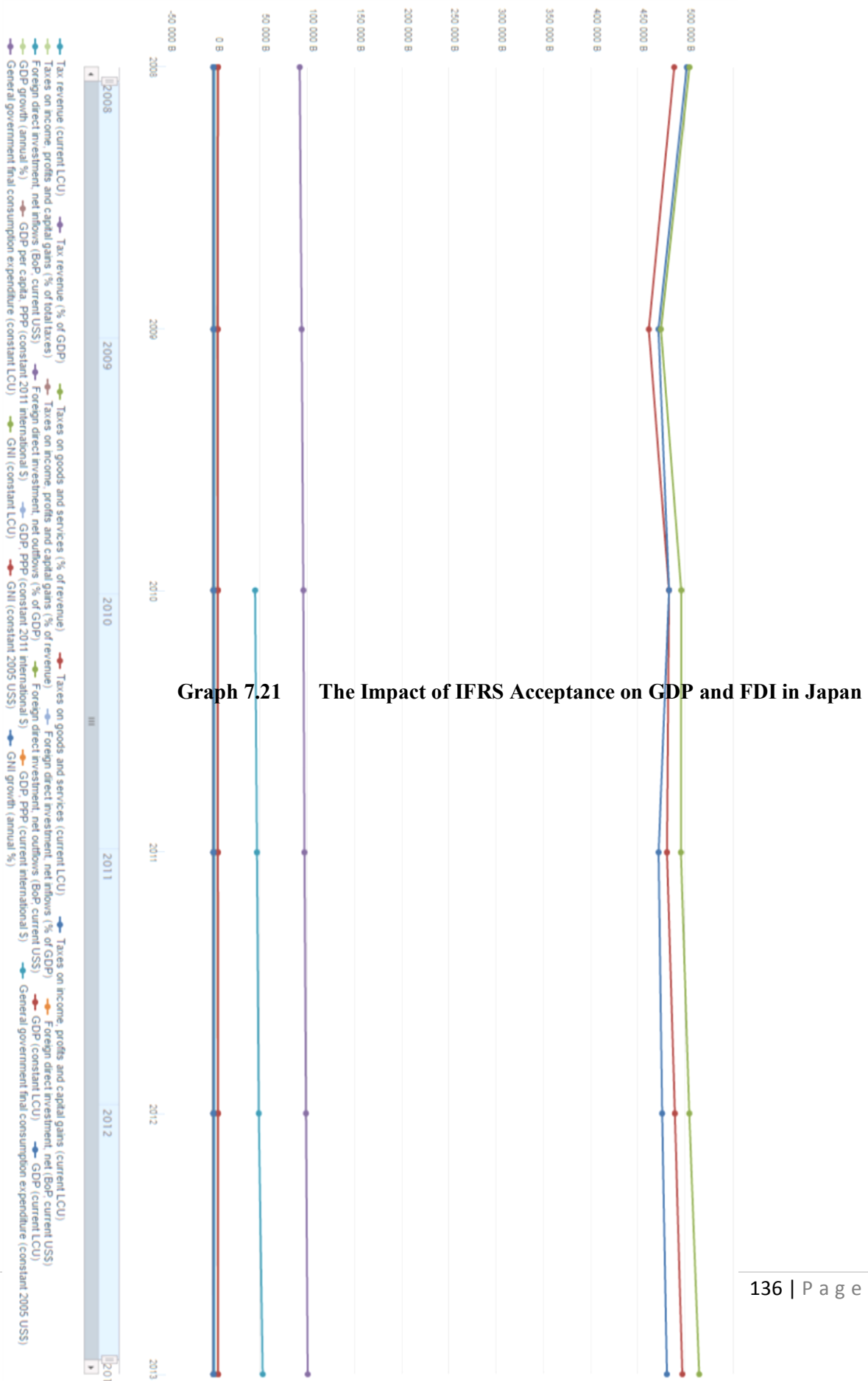
It is the hope that the analysis of this section will further strengthen our understanding of IFRS in a global marketplace and demonstrate the relevance of the multi-agency model and identifying the motivating factors that have inspired some countries to adopt and may influence others' decision to do the same. At the very least, this analysis will provide enough correlation to warrant further investigation utilizing more sophisticated means to check for statistical irrelevancies. It will also demonstrate the clear upward trend of FDI inflows targeted around IFRS adoption years. This study utilizes two years before adoption and no less than two years after in most instances. However in two cases more data is provided and discussed. In the instance of the United States which has not accepted IFRS nor made any definitive pledge to do so, we take a look at the levels of investment and tax revenues that are flowing into the United States. Since the US has no official implementation date for IFRS it was prudent to analyze the years starting from 2005 when IFRS became mandatory in the EU states. In the case of China extra data is supplied and analyzed for a different reason. China implemented a set of IFRS equivalent standards in 2006 which likely had a substantial impact

on investment inflows and GDP growth. That said, official adoption did not come until 2010. It is therefore relevant to analyze the entire selection to some degree, regardless of whether they've implemented IFRS, converged to an equivalent standard or have yet to declare acceptance of IFRS.

The following pages include graphs and charts for each of the 10 countries involved in this study. The data represented primarily covers GDP, GNI, FDI flows, and tax revenues was recovered from the World Bank data archives and then put into graph and table format to more clearly represent the data. The years covered by the data generally include at least two years prior to and after adoption when available and longer sustained periods of data for non-adopting countries such as the US, in which the study includes data for the years following the EU adoption period of IFRS. This helps identify and account for fluctuations in global economics that might disturb multiple economies and to demonstrate the trend of economic spiking in both GDP and FDI that tends to accompany IFRS acceptance or adoption while non adopters remain consistent. Each collection of data is followed by a brief analysis of the economy and how it's affected by IFRS adoption or the lack of adoption.

	2008	2009	2010	2011	2012	2013
Tax revenue (current LCU)	..	..	.. 44,080,100,000,000	45,980,100,000,000	47,923,800,000,000	52,132,100,000,000
Tax revenue (% of GDP)	..	..	9.1	..	10.1	10.9
Taxes on goods and services (% of revenue)	..	..	..	..	..	..
Taxes on goods and services (current LCU)	..	..	..	..	..	..
Taxes on income, profits and capital gains (current LCU)	..	..	..	..	..	..
Taxes on income, profits and capital gains (% of total taxes)	..	..	..	..	..	..
Taxes on income, profits and capital gains (% of revenue)	..	..	..	..	..	..
Foreign direct investment, net inflows (% of GDP)	0.5	0.2	0.1	[illegible]	0.0	0.2
Foreign direct investment, net (BoP, current US$)	89,018,788,218.0	61,450,645,280.8	72,215,534,552.5	117,685,915,133	117,085,390,234.6	139,789,694,644.3
Foreign direct investment, net inflows (BoP, current US$)	24,624,845,329.6	12,226,471,578.7	7,440,979,284.2	-850,717,033	546,962,692.2	7,412,010,906.0
Foreign direct investment, net outflows (% of GDP)	2.3	1.5	1.4	[illegible]	2.0	3.0
Foreign direct investment, net outflows (BoP, current US$)	113,643,633,547.6	73,677,116,859.5	79,656,513,836.6	116,835,198,104	117,632,352,926.8	147,201,705,550.3
GDP (constant LCU)	487,907,823,688,601	460,941,272,987,001	482,384,400,000,001	480,200,526,001	488,621,753,527,001	496,505,015,195,401
GDP (current LCU)	501,209,300,000,001	471,138,700,000,001	482,384,400,000,001	471,310,800,000,001	475,110,400,000,001	480,128,000,000,001
GDP growth (annual %)	-1.0	-5.5	4.7	[illegible]	1.8	1.6
GDP per capita, PPP (constant 2011 international $)	34,799.7	32,880.4	34,403.8	34,3[illegible]	34,987.6	35,614.3
GDP, PPP (constant 2011 international $)	4,456,550,373,437,0	4,210,237,882,091,9	4,406,099,417,934,8	4,386,151,911,43[illegible]	4,463,071,409,037,3	4,535,077,126,155,3
GDP, PPP (current international $)	4,289,492,989,453,6	4,079,240,941,506,4	4,321,148,116,736,8	4,386,151,911,43[illegible]	4,556,366,185,034,2	4,673,088,854,619,6
General government final consumption expenditure (constant 2005 US$)	847,440,803,787.7	866,688,986,030.1	883,112,770,849.4	894,014,781,58[illegible]	908,923,390,148.5	925,843,463,239.9
General government final consumption expenditure (constant LCU)	91,286,028,136,200	93,359,435,621,300	95,128,600,000,000	96,302,960,798,5[illegible]	97,908,910,918,500	99,731,535,296,962,
GNI (constant LCU)	504,098,566,842,02	473,834,704,573,74	495,358,700,000,001	494,971,157,920,[illegible]	503,878,009,057,13	514,385,894,624,99,
GNI (constant 2005 US$)	4,855,416,694,131,5	4,563,918,817,026,2	4,771,235,349,131,7	4,767,502,590,48[illegible]	4,853,292,308,106,2	4,954,502,996,575,0
GNI growth (annual %)	-1.1	-6.0	4.5	[illegible]	1.8	2.1

Table 7.21 The Impact of IFRS Acceptance on GDP and FDI in the Japan



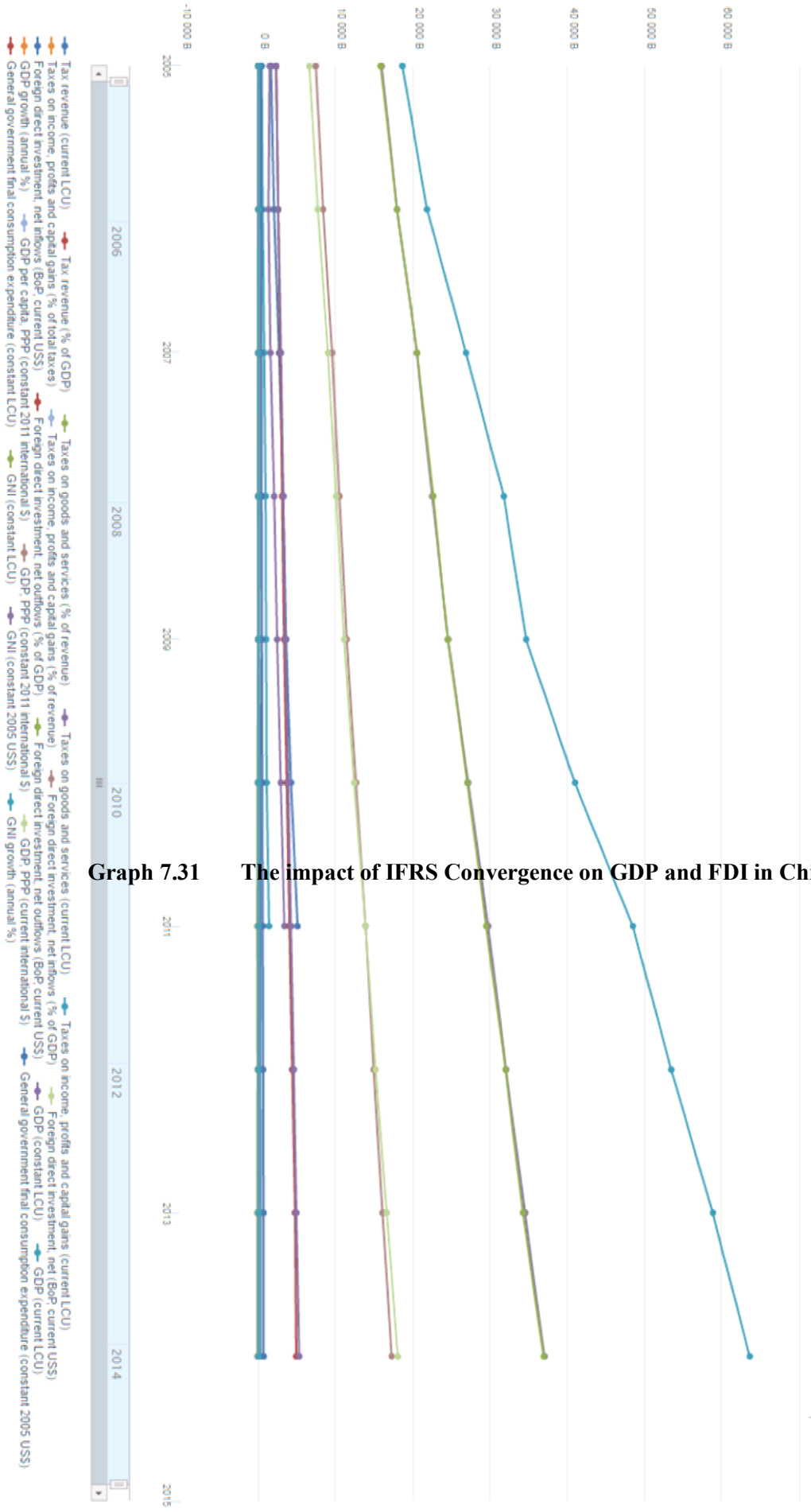
Graph 7.21 The Impact of IFRS Acceptance on GDP and FDI in Japan

7.2 Japan – Analysis of the Impact of IFRS Acceptance on GDP and FDI

Like the United States, Japan is not an IFRS adopter. They are however pledged to the commitment of convergence, albeit without a set schedule, and have been working steadily towards that event. In 2010 however; Japan announced that it would permit qualified domestic companies to apply IFRS for consolidated financial reporting In the 2009 fiscal year Japan's GDP growth had slowed to -5.5%. According to this data it does not appear to have affected the economic dealings of the economy overly much however, It heralded the potential for severe troubles in the near future. Like China, in 2010 with Japan's announcement of IFRS for qualified companies, there was a surge of foreign investment inflows and domestic investment outflows, both of which nearly doubled over prior years. This is important to note because the GDP levels remain stable at roughly $4.4 trillion throughout the period ranging from 2008 to 2013. With the increase of investment flows to and from Japan in 2010 and the subsequent rise of the GDP to positive levels, it might be safe to assume that IFRS are playing a vital role in sustaining Japan's stalling economy and are likely responsible for averting Japan's further economic decline. Japan's economic condition is not improving and with the well documented declining birth rate, overwhelming elderly population levels and struggling markets, it is important to point out that IFRS may play a vital role in sustaining Japanese markets in the near future. Despite the fact that very few companies voluntarily adopted IFRS in 2010, the public anticipation still lead to substantial investment and with Japan moving ever closer to convergence these inflows may prove vital in sustaining Japan's economy.

Table 7.31 The Impact of IFRS Convergence on GDP and FDI in China

	2007	2008	2009	2010	2011	2012	2013	2014	2015
Tax revenue (current LCU)	2,639,181,770,000.0	3,224,826,000,000.0	3,593,023,373,100.0	4,208,581,829,050.0	32,027,000,000.0	..	..	..	..
Tax revenue (% of GDP)	9.8	10.2	10.4	10.3	10.4	..	..	..	..
Taxes on goods and services (% of revenue)	33.5	54.3	58.9	62.2	61.4	..	..	..	..
Taxes on goods and services (current LCU)	1,543,707,920,000.0	2,010,058,000,000.0	2,394,166,167,200.0	2,880,537,167,829.0	3,364,669,000,000.0	..	..	..	..
Taxes on income, profits and capital gains (current LCU)	755,876,560,000.0	940,778,000,000.0	998,589,954,400.0	1,069,814,000,000.0	1,365,643,000,000.0	..	..	..	..
Taxes on income, profits and capital gains (% of total taxes)	28.6	29.2	27.8	25.4	27.1	..	..	..	..
Taxes on income, profits and capital gains (% of revenue)	16.4	25.4	24.6	23.1	24.9	..	..	..	..
Foreign direct investment, net inflows (% of GDP)	4.4	3.8	2.6	4.0	3.7	2.9	3.1	2.8	..
Foreign direct investment, net (BoP, current US$)	-139,094,535,501.6	-114,792,373,681.9	-87,167,067,369.5	-185,749,891,191.8	-231,651,578,090.3	-176,250,481,637.4	-217,957,551,783.7	-208,678,695,641.1	..
Foreign direct investment, net inflows (BoP, current US$)	156,249,335,203.2	171,534,650,311.6	131,057,052,869.5	243,703,558.2	280,072,219,149.9	241,213,868,161.4	290,928,431,467.0	289,097,181,064.3	..
Foreign direct investment, net outflows (% of GDP)	0.5	1.2	0.9	1.0	0.6	0.8	0.8	0.8	..
Foreign direct investment, net outflows (BoP, current US$)	17,154,799,701.6	56,742,276,629.7	43,889,985,500.0	57,953,366.4	48,420,641,059.6	64,963,386,524.0	72,970,879,683.3	80,418,485,423.3	..
GDP (constant LCU)	20,456,234,340,000.0	22,424,814,990,000.0	24,495,421,740,000.0	27,099,707,000,000.0	29,669,976,570,000.0	31,969,488,050,000.0	34,425,962,760,000.0	36,928,200,412,552.0	..
GDP (current LCU)	26,801,940,000,000.0	31,675,170,000,000.0	34,562,920,000,000.0	40,890,300,000,000.0	48,412,350,000,000.0	53,412,303,890,000.0	58,801,875,590,000.0	63,613,873,246,030.0	..
GDP growth (annual %)	14.2	9.6	9.2	10.6	9.5	7.8	7.7	7.3	..
GDP per capita, PPP (constant 2011 international $)	7,224.9	7,879.7	8,564.6	9,429.5	10,274.5	11,017.0	11,805.1	12,599.2	..
GDP, PPP (constant 2011 international $)	9,521,606,269,329.6	10,437,906,383,376.1	11,401,695,802,506.1	12,613,899,393,917.1	13,810,256,092,313.1	14,880,592,037,847.1	16,023,988,452,379.1	17,188,685,792,265.1	..
GDP, PPP (current international $)	8,970,991,068,643.5	10,027,214,316,805.1	11,036,263,788,698.1	12,358,729,826,026.1	13,810,256,092,313.1	15,147,732,172,364.1	16,554,707,575,584.1	18,017,072,919,507.1	..
General government final consumption expenditure (constant 2005 US$)	398,804,249,887.5	433,167,798,997.8	468,782,454,430.9	519,953,565,565.5	569,216,116,453.7	618,370,930,047.5	668,946,122,836.9	689,845,500,223.3	..
General government final consumption expenditure (constant LCU)	2,811,828,994,900.0	3,054,114,336,100.0	3,305,220,789,500.0	3,666,010,100,000.0	4,013,343,340,900.0	4,359,916,704,000.0	4,716,504,663,000.0	4,863,858,848,234.8	..
GNI (constant LCU)	20,502,324,477,660.2	22,560,262,119,296.2	24,454,194,250,200.2	26,987,791,492,493.2	29,403,265,044,037.3	31,896,721,513,144.3	34,150,895,030,914.3	36,826,727,608,214.1	..
GNI (constant 2005 US$)	2,926,197,693,440.2	3,219,917,187,869.3	3,490,228,968,322.4	3,851,837,002.5	4,196,585,925,914.1	4,552,464,917,905.7	4,874,192,210,608.4	5,256,100,863,174.1	..
GNI growth (annual %)	14.7	10.0	8.4	10.4	9.0	8.5	7.1	7.8	..



Graph 7.31 The impact of IFRS Convergence on GDP and FDI in China

7.3 China - Analysis of the Impact of IFRS Convergence on GDP and FDI

One of the more complex cases for analysis in this chapter is that of China. As previously mentioned China did not officially converged IFRS until 2010, however; in 2006 they announced the release of their set of IFRS equivalent standards. It is for this reason that it is valid to take a look at their economy from the 2007 year right after adoption of their new standards until current time. The quote on quote economic benefits of IFRS likely accompanied China's release encouraging investors to enter what has historically been a very closed and unknown market.

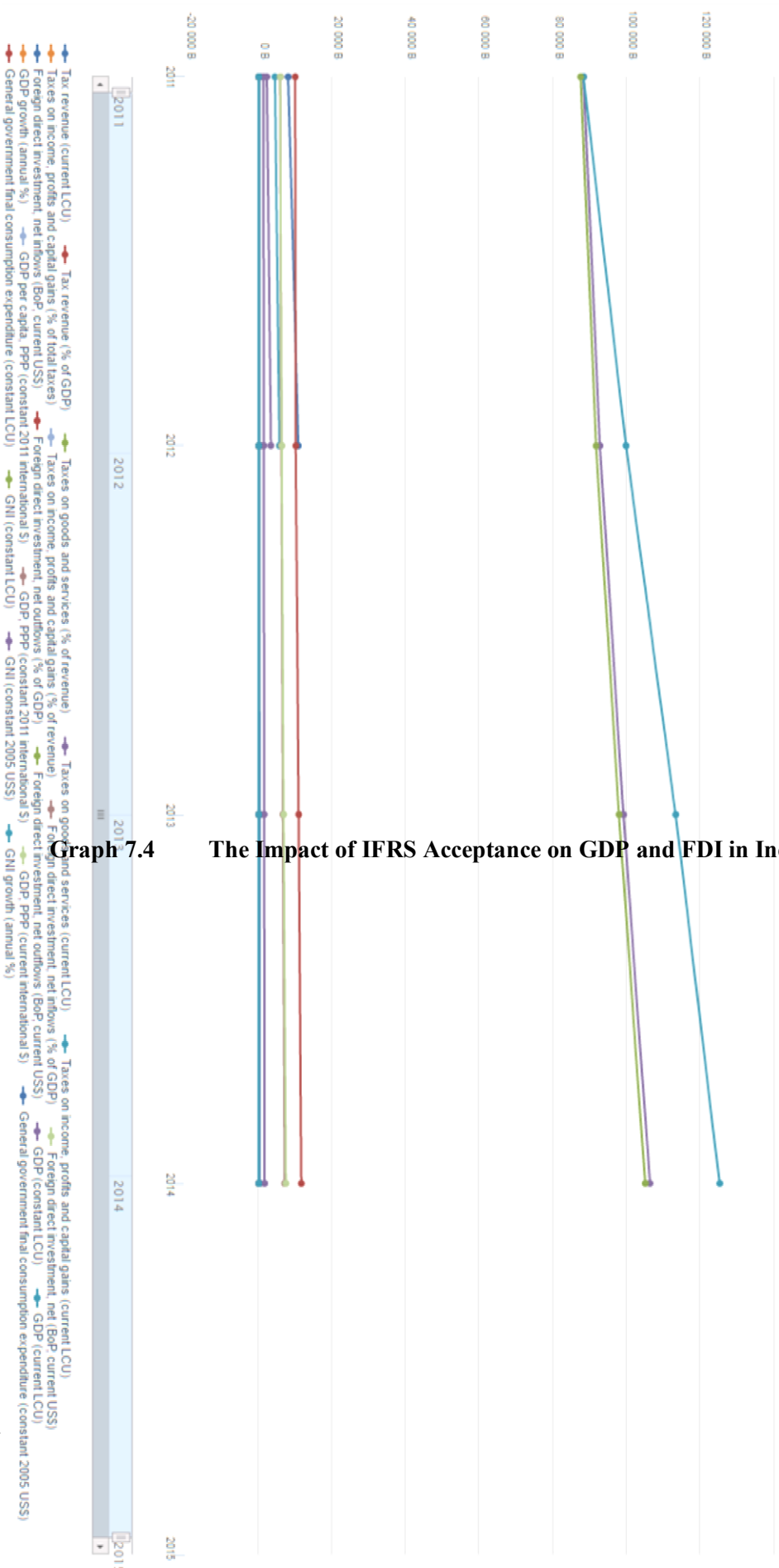
In the 2007 year China's GDP was roughly $9.5 billion and the government claimed approximately $2.6 trillion in tax revenue tax revenue. The government expenditures for that year were 2 .8 trillion dollars as the Chinese government poured the funds back into the economy. For the 2007 year, China experienced GDP growth of 14.2% and foreign investment of $156 billion. In the subsequent years leading up to 2010 China's economy continued to grow by approximately 3 billion dollars annually and sustained roughly 10% annual GDP growth. During those years the government continued to invest the majority of tax revenue back into the economy leading to further growth. Foreign investment fluctuated slightly in 2008 2009, likely as a result of uncertainty in the newly opened Chinese market. However from 2010 and the public declaration mandatory IFRS implementation the economy skyrocketed. Foreign investment inflows nearly doubled from 2009 to 2010 and have grown annually ever since. This growth has brought new jobs and opportunities to the Chinese people and as a result China's tax revenue has increased drastically. Between 2010 and 2011 China gained approximately 1 trillion in additional tax revenue.

Additionally with the IFRS and China's growing familiarity with the international market, China began to invest heavily outside of the country with FDI outflows increasing roughly 400% between 2007 and 2014. The most substantial growth came in the years following IFRS mandatory adoption however; we likely cannot credit IFRS with this task in itself. The continued growth of the Chinese economy made it inevitable that growth would reach outside of their borders eventually, but IFRS no doubt played a part. While the

Chinese economy certainly continued to grow during the years following the Chinese accounting standard release, it pales in comparison to that seen following the adoption of mandatory IFRS. The release of the 2006 standards sparked the interests of the international community and China's growth has only recently slowed.

	2011	2012	2013	2014	2015
Tax revenue (current LCU)	7,930,720,000,000.0	10,776,120,000,000.	..	..	..
Tax revenue (% of GDP)	9.0	10.8	..	..	..
Taxes on goods and services (% of revenue)	21.7	26.0	..	..	..
Taxes on goods and services (current LCU)	2,185,920,000,000.0	3,264,420,000,000.0	..	..	..
Taxes on income, profits and capital gains (current LCU)	4,378,260,000,000.0	5,630,960,000,000.0	..	..	..
Taxes on income, profits and capital gains (% of total taxes)	55.2	52.3	..	..	..
Taxes on income, profits and capital gains (% of revenue)	43.4	44.8	..	..	..
Foreign direct investment, net inflows (% of GDP)	2.0	1.3	1.5	1.7	..
Foreign direct investment, net (BoP, current US$)	-23,890,659,988.1	-15,442,447,342.9	-26,3	082,470.3	-23,920,811,413.0
Foreign direct investment, net inflows (BoP, current US$)	36,498,654,597.9	23,995,685,014.2	28,1	031,270.3	33,871,408,468.4
Foreign direct investment, net outflows (% of GDP)	0.7	0.5	0.1		0.5
Foreign direct investment, net outflows (BoP, current US$)	12,607,994,609.7	8,553,237,671.3	1,7	948,800.0	9,950,597,055.4
GDP (constant LCU)	88,320,115,262,326.	92,808,029,430,359.	99,211	66,990,668.	106,439,825,844,45
GDP (current LCU)	88,320,115,262,326.	99,885,397,435,329.	113,45	57,060,597	125,412,081,273,53
GDP growth (annual %)	6.6	5.1	6.9		7.3
GDP per capita, PPP (constant 2011 international $)	4,685.9	4,861.1	5,131.8		5,438.6
GDP, PPP (constant 2011 international $)	5,845,362,020,807.5	6,142,389,294,294.	96,566,1	075,020.9	7,044,593,563,363.9
GDP, PPP (current international $)	5,845,362,020,807.5	6,252,659,013,279.	26,783,6	390,887.8	7,384,098,903,973.7
General government final consumption expenditure (constant 2005 US$)	146,542,039,642.1	149,055,855,652.0	161,2	814,203.6	171,864,264,214.7
General government final consumption expenditure (constant LCU)	9,872,200,000,000.0	10,041,550,000,000.	10,861,1	00,000,000.	11,578,100,000,000.
GNI (constant LCU)	87,551,875,262,326.	91,726,490,758,635.	98,000,1	51,054,860.	105,135,801,210,39
GNI (constant 2005 US$)	1,314,601,405,617.1	1,377,283,734,041.4	1,471,7	22,093.0	1,578,626,061,837.6
GNI growth (annual %)	6.8	4.8	6.8		7.3

Table 7.4 The Impact of IFRS acceptance on GDP and FDI in India



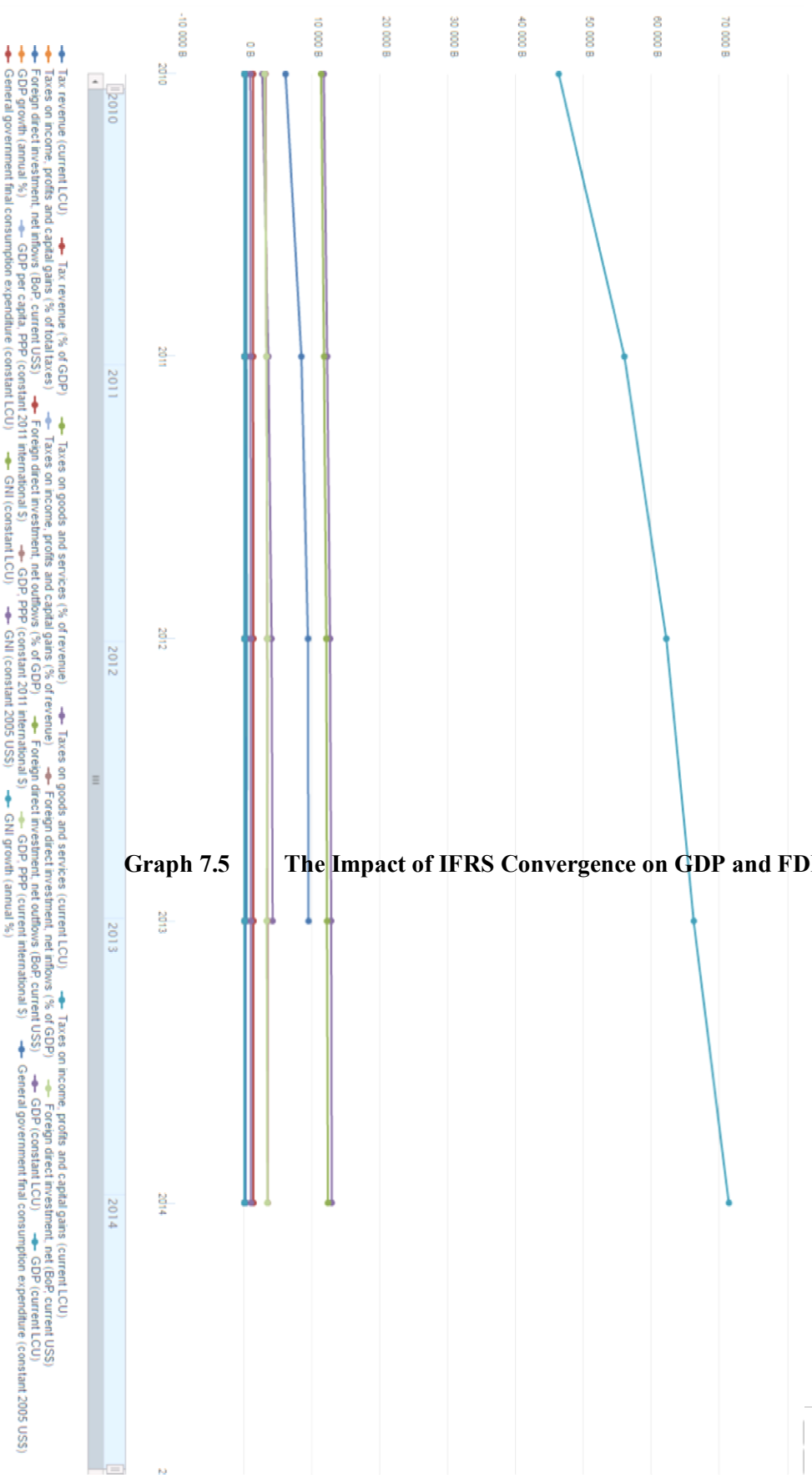
Graph 7.4 The Impact of IFRS Acceptance on GDP and FDI in India

7.4 India – Analysis of the Impact of IFRS Acceptance on GDP and FDI

Similar to the US, the period covered by this research did not see the adoption or convergence of IFRS standards by India. The country did make strong inroads into the adoption of IFRS as it was seen as a necessary step for further growth in the international community. However, full on convergence was not slated to take place until the 2015 year and economic data for years prior to 2010 and following 2014 was limited even for well sourced organizations such as the World Bank. Though not officially converged, India has required the use of 'notified Indian standards that have been converged with IFRS' for many large listed companies since 2011. And was mandatorily extended to all listed companies by 2015 with India's official convergence with IFRS. Unfortunately the limited data available does little to demonstrate potential effects of IFRS in India. While we can clearly see increases in GDP, FDI input and output as well as tax revenue growth in government expenditure, we must also consider the fact that for nearly a decade India has been one of the fastest-growing economies in the world which has not been a result of IFRS but rather the trigger for IFRS adoption to ensure continued growth. As the data pertinent to prior years before IFRS convergence efforts began is absent and the more valuable data directly preceding and following official IFRS convergence was also unavailable, it is strongly recommended that the analysis of India. Performed in the near future when more substantial data related to economic activity is available and can provide a more thorough presentation of IFRS effects.

Table 7.5 The Impact of IFRS Acceptance on GDP and FDI in Russia

	2010	2011	2012	2013	2014	2015
Tax revenue (current LCU)	6,042,500,000,000.0	8,388,430,000,000.0	9,364,300,000,000.0	9,439,600,000,000.0	..	..
Tax revenue (% of GDP)	13.0	15.0	15.7	14.3	..	..
Taxes on goods and services (% of revenue)	27.3	25.0	26.4	28.6	..	..
Taxes on goods and services (current LCU)	2,611,900,055,552.0	3,496,400,125,952.0	3,974,699,941,888.0	4,128,700,104,704.0	..	..
Taxes on income, profits and capital gains (current LCU)	267,299,995,648.0	304,599,990,272.0	361,099,984,896.0	336,600,006,656.0	..	..
Taxes on income, profits and capital gains (% of total taxes)	4.4	3.6	3.9	3.6	..	..
Taxes on income, profits and capital gains (% of revenue)	2.8	2.2	2.4	2.3	..	..
Foreign direct investment, net inflows (% of GDP)	2.8	2.9	2.6	3.3	..	1.2
Foreign direct investment, net (BoP, current US$)	9,448,500,000.0	11,767,160,000.0	-1,765,140,000.0	17,287,630,000.0	33,502,050,000.0	..
Foreign direct investment, net inflows (BoP, current US$)	43,167,769,100.0	55,083,632,500.0	50,587,554,700.0	69,218,898,709.0	22,890,510,447.0	..
Foreign direct investment, net outflows (% of GDP)	3.5	3.5	2.9	4.2	3.0	..
Foreign direct investment, net outflows (BoP, current US$)	52,616,270,000.0	66,850,790,000.0	48,822,420,000.0	86,506,530,000.0	56,392,560,000.0	..
GDP (constant LCU)	11,707,559,466,800.	12,206,790,474,000.	12,622,498,436,800.	12,791,740,594,700.	12,873,669,872,300.	..
GDP (current LCU)	46,308,541,189,900.	55,967,226,762,400.	62,176,494,979,200.	66,190,119,918,000.	71,406,399,199,400.	..
GDP growth (annual %)	4.5	4.3	3.4	1.3	0.6	..
GDP per capita, PPP (constant 2011 international $)	21,663.6	22,569.8	23,299.3	23,561.4	23,292.9	..
GDP, PPP (constant 2011 international $)	3,094,639,353,008.5	3,226,600,239,092.7	3,336,483,620,397.3	3,381,219,113,179.9	3,402,875,340,282.0	..
GDP, PPP (current international $)	2,928,121,192,873.6	3,226,600,239,092.7	3,368,060,309,297.0	3,232,198,277,498.8	3,358,561,167,035.9	..
General government final consumption expenditure (constant 2005 US$)	137,103,017,460.1	139,022,459,710.0	142,637,043,655.1	144,206,051,136.6	144,061,845,085.2	..
General government final consumption expenditure (constant LCU)	1,265,291,282,100.0	1,283,005,360,100.0	1,316,363,499,400.0	1,330,843,497,900.0	1,329,512,654,400.0	..
GNI (constant LCU)	11,300,900,049,455.	11,727,459,227,345.	12,081,419,377,587.	12,179,581,925,247.	12,311,330,057,787.	..
GNI (constant 2005 US$)	878,750,970,484.4	911,919,947,282.7	939,443,668,771.4	947,076,727,523.3	957,321,380,499.8	..
GNI growth (annual %)	4.4	3.8	3.0	0.8	1.1	..



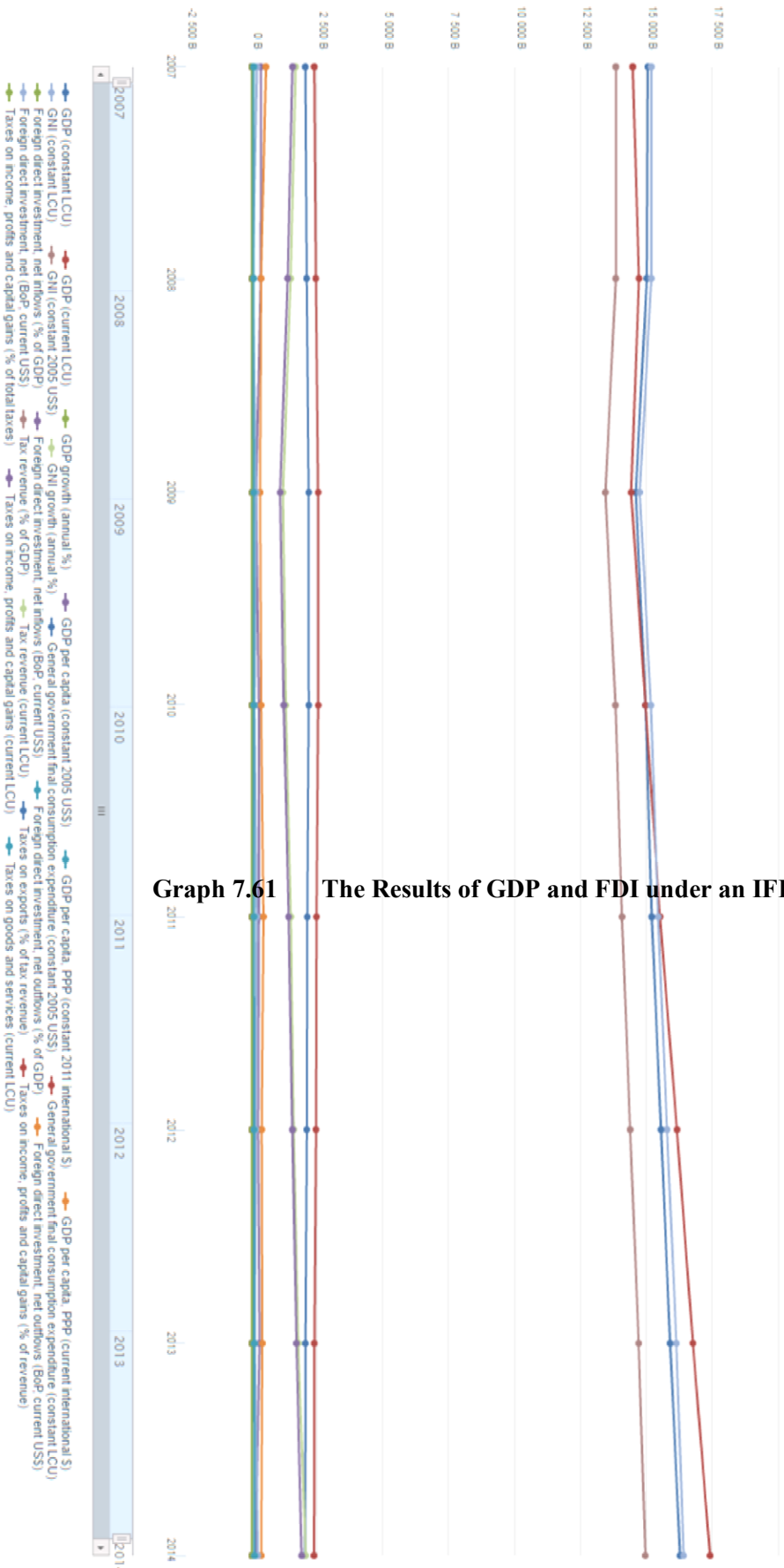
Graph 7.5 The Impact of IFRS Convergence on GDP and FDI in Russia

7.5 Russia – Analysis of the Impact of IFRS Convergence on GDP and FDI

Russia passed legislation in 2012 officially converging with IFRS standards. As Russia has historically had closed operations as a result of their inability to gain access to capital markets, IFRS was largely seen as a means of improving foreign investment and thereby cash inflows. The difficulty in analyzing China comes in the fact that the country frequently experiences unrest both internally and internationally. China began to see growth and foreign investment leading up to IFRS adoption however social unrest decimated foreign investment prior to IFRS adoption. The year following adoption Russia did see a massive boost to net inflows as well as outflows for investment however; the country was again hindered by unrest only this time from the international community as a result of the difficulties involved in the crime and annexation. New sanctions were levied against the Russian Federation and the investors once again pulled back from what might otherwise have been a lucrative and growing market. Similar to India, even with the vast resources of the World Bank at work the data available or presented by the Russian government is insufficient to wholly demonstrate the effects of IFRS on the economy. Especially given the international incidents that occurred, and the strong nationalistic Cold War like rhetoric that has dominated Russian politics prior to the annexation of crime and extending to current activities and Syria, pertinent data has not been forthcoming and proper analysis will have to wait until international tensions subside and the spirit of international cooperation is reinstated.

Table 7.6 The results of GDP and FDI under an IFRS non-adopter, the US

	2007	2008	2009	2010	2011	2012	2013	2014
GDP (constant LCU)	15,055,395,304,800	15,011,490,541,400	14,594,842,181,900	14,964,372,000,000	15,204,019,634,600	15,556,917,771,600	15,902,173,696,200	16,281,949,408,412
GDP (current LCU)	14,477,635,000,000	14,718,582,000,000	14,418,739,000,000	14,964,372,000,000	15,517,926,000,000	16,163,158,000,000	16,768,053,000,000	17,419,000,000,000
GDP growth (annual %)	1.8	-0.3	-2.8	2.5	1.6	2.3	2.2	2.4
GDP per capita (constant 2005 US$)	45,420.2	44,861.4	43,235.6	44,381.2	44,324.9	45,008.6	45,660.7	46,405.2
GDP per capita, PPP (constant 2011 international $)	51,011.4	50,383.8	48,557.9	49,972.8	49,781.4	50,549.2	51,281.6	52,117.7
GDP per capita, PPP (current international $)	48,061.5	48,401.4	47,001.6	49,974.1	49,781.4	51,456.7	52,980.0	54,629.5
GNI (constant LCU)	15,186,252,535,342	15,185,581,921,842	14,748,168,329,811	15,170,341,000,000	15,444,855,943,727	15,784,993,981,355	16,139,468,898,695	16,415,514,678,001
GNI (constant 2005 US$)	13,837,678,882,021	13,837,067,820,520	13,438,497,547,105	13,823,180,300,090	14,073,317,721,472	14,383,250,730,244	14,706,247,471,307	14,957,779,759,598
GNI growth (annual %)	2.2	0.0	-2.9	2.9	1.8	2.2	2.2	1.7
General government final consumption expenditure (constant 2005 US$)	2,029,797,001,659	2,081,212,646,860	2,159,175,846,583	2,161,651,145,858	2,104,289,692,368	2,085,792,070,555	2,033,853,797,789	2,022,027,823,835
General government final consumption expenditure (constant LCU)	2,368,361,925,700	2,428,353,568,400	2,519,320,829,500	2,522,209,000,000	2,455,279,805,800	2,433,696,828,200	2,373,095,385,000	2,359,296,868,978
Foreign direct investment, net inflows (% of GDP)	2.3	2.3	1.1	1.7	1.7	1.4	1.7	0.8
Foreign direct investment, net inflows (BoP, current US$)	340,065,000,000.0	332,734,000,000.0	153,788,000,000.0	259,344,000,000.0	257,410,000,000.0	232,001,000,000.0	287,162,000,000.0	131,829,000,000.0
Foreign direct investment, net outflows (% of GDP)	3.7	2.4	2.2	2.4	2.8	2.3	2.4	2.1
Foreign direct investment, net outflows (BoP, current US$)	532,941,000,000.0	351,724,000,000.0	313,726,000,000.0	354,575,000,000.0	440,406,000,000.0	377,900,000,000.0	399,203,000,000.0	357,189,000,000.0
Foreign direct investment, net (BoP, current US$)	192,876,000,000.0	18,990,000,000.0	159,938,000,000.0	95,231,000,000.0	182,996,000,000.0	145,899,000,000.0	112,041,000,000.0	225,360,000,000.0
Tax revenue (% of GDP)	11.5	10.0	8.2	8.6	9.6	9.8	10.5	11.7
Tax revenue (current LCU)	1,663,589,941,248.0	1,476,339,957,760.0	1,184,360,038,400.0	1,288,553,000,000.0	1,488,027,000,000.0	1,586,624,000,000.0	1,766,203,000,000.0	2,045,449,994,240.0
Taxes on exports (% of tax revenue)	..	..	..	..	..	..	..	..
Taxes on income, profits and capital gains (% of revenue)	57.2	53.3	47.5	50.6	82.3	86.1	81.4	56.7
Taxes on income, profits and capital gains (% of total taxes)	92.7	91.7	90.5	93.8	93.6	96.8	95.7	92.4
Taxes on income, profits and capital gains (current LCU)	1,542,509,953,024.0	1,354,109,943,808.0	1,072,379,985,920.0	1,208,199,936,448.0	1,392,670,015,488.0	1,536,530,055,168.0	1,690,899,972,096.0	1,890,399,944,704.0
Taxes on goods and services (current LCU)	65,833,000,960.0	64,744,001,536.0	68,303,998,976.0	68,176,998,400.0	76,732,997,632.0	81,391,001,600.0	85,459,001,344.0	96,699,998,208.0



Graph 7.61 The Results of GDP and FDI under an IFRS non-adopter, the US

7.6 US – Analysis of GDP and FDI under an IFRS non-adopter

As stated in the introduction, the United States is not officially declared an adoption date for IFRS. Given that fact it was necessary to analyze more data for the United States to determine whether or not black of IFRS may be impacting growth and investment in the United States. Using the World Bank's databank system, data was recovered for the fiscal years ranging from 2007 to 2014. Granted, this date falls after IFRS adoption in the EU, however it seemed relevant given the fact that in 2008 the US suffered a critical financial crisis. This is beneficial in that it enables us to see the effect of the crisis on the United States growth and investment while at the same time being able to identify whether or not the US gained investment to recover. In most cases of IFRS adoption especially within the first two years, foreign direct investment has increased, driving up tax revenues for the government and improving GDP i.e. the financial health of the nation, thereby spurring further investment in future years. In the case of the United States no such application date exists so we instead use the financial crisis has a recovery point given that it is not without precedent for investors to use such situations to gain cheap and easy access to the market when it might otherwise be costly or difficult.

Prior to the financial crisis in 2008, the United States had a GDP of more than $15 trillion and experienced 1.8% growth for the 2007 fiscal year the government's tax revenue for that year was nearly $1.6 trillion, 57.2% of which came from taxes on income, profits and capital gains. This $1.6 trillion equated to roughly 11.5% of the US is GDP for the 2007 fiscal year which the government fed back into the economy. During that year foreign investment inflows totaled roughly $340 billion approximately 3.7% of the GDP. The 2008 fiscal year saw similar results with tax revenues varying roughly $200 billion in foreign inflows remaining relatively stable however economic growth by GDP slowed to -.3% which had some significant impact in the coming year.

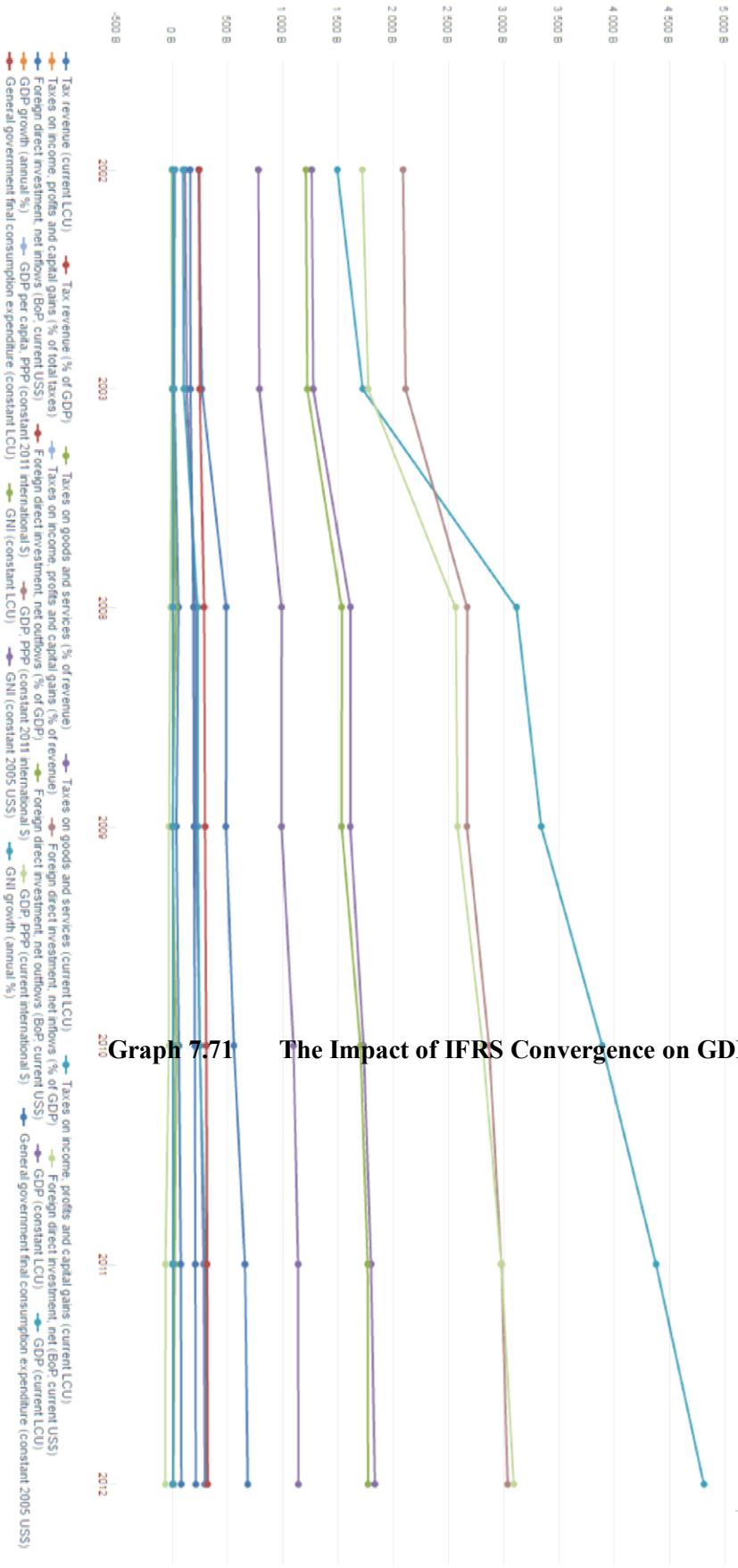
The 2009 year truly demonstrated the impact of the financial crisis of 2008 as GDP growth slumped to -2.8% tax revenues plummeted to $1 trillion down roughly 10% from 2007 and FDI inflows decreased by nearly half sinking down to 1.1% of GDP as investors lost confidence in the US market. It is from this point

that we can start to discuss the potential for IFRS having impact in the US investment market. As previously mentioned, investors tend to be drawn to opportunity and the down slump in the US economy is an opportunity to gain a stronger footing in coming years of prosperity. With that in mind it is surprising to see that did not occur. Instead what is been identified is a continued slump in foreign investment. While the economy has regained its footing and is growing stronger than ever from the perspective of GDP and government tax revenue, foreign investment inflows have never truly recovered and have actually fluctuated downward. As of 2014, the last. For data available at the current time, GDP is at an all-time high of roughly $16.2 trillion while foreign inflows are down to roughly 131 billion roughly .8% of the GDP and less than half their 2007 levels.

From this information we are forced to consider what causes might successfully keep investors from entering the strongest marketplace in the world. While it is unlikely that IFRS themselves and the lack of adoption by the US is a direct driving factor, it is still possible that investor confidence in the US market has failed to be rekindled as investors may have lost confidence in the quality and transparency of US GAAP. If that is the case, it present some difficulties for the future of the US market as IFRS usage and implementation of IFRS continues to increase at a steady rate and is rapidly catching up to the levels of US GAAP.

Table 7.71 The Impact of IFRS Convergence on GDP and FDI in Brazil

	2002	2003	2008	2009	2010	2011	2012
Tax revenue (current LCU)	234,038,537,148.0	261,890,948,131.3	482,299,684,871.2	479,389,[illegible]145.7	551,584,698,126.2	652,032,391,630.0	677,332,500,110.0
Tax revenue (% of GDP)	15.7	15.2	15.5	15.3	14.4	14.2	14.9	14.1
Taxes on goods and services (% of revenue)	34.3	35.4	25.7	26.6	24.8	26.8	25.1
Taxes on goods and services (current LCU)	109,502,283,451.0	125,776,108,262.6	206,439,673,895.1	205,604,[illegible]0,387.5	245,218,642,082.0	277,984,165,218.3	287,529,243,006.3
Taxes on income, profits and capital gains (current LCU)	90,727,576,559.0	98,294,703,848.0	223,862,656,027.8	223,845,[illegible]9,200.6	241,042,681,483.0	294,761,407,699.4	303,194,859,414.2
Taxes on income, profits and capital gains (% of total taxes)	38.8	37.5	46.4	46.7	43.7	45.2	44.8
Taxes on income, profits and capital gains (% of revenue)	28.4	27.6	27.8	29.0	24.4	28.5	26.5
Foreign direct investment, net inflows (% of GDP)	3.3	1.8	3.0	1.9	2.4	2.7	3.1
Foreign direct investment, net (BoP, current US$)	-14,108,096,193.1	-9,894,224,671.0	-24,601,090,273.6	-36,032,[illegible]9,300.0	-36,918,923,577.0	-67,689,141,256.4	-68,093,253,944.6
Foreign direct investment, net inflows (BoP, current US$)	16,590,204,193.1	10,143,524,671.0	50,716,402,711.5	31,480,[illegible]9,200.0	53,344,632,546.7	71,538,657,409.4	76,110,663,188.8
Foreign direct investment, net outflows (% of GDP)	0.5	0.0	1.5	-0.3	1.2	0.6	0.2
Foreign direct investment, net outflows (BoP, current US$)	2,478,504,000.0	228,789,000.0	26,115,312,437.9	-4,551,[illegible]1,100.0	26,763,010,595.5	16,067,117,026.9	5,207,573,379.5
GDP (constant LCU)	1,256,188,949,173.1	1,270,513,511,012.0	1,607,088,982,061.0	1,605,061,[illegible]0,940.3	1,725,903,522,669.4	1,793,390,757,536.5	1,827,742,415,357.9
GDP (current LCU)	1,488,788,000,000.0	1,717,951,000,000.0	3,109,803,000,000.0	3,333,040,[illegible]0,000.0	3,885,848,000,000.0	4,373,658,000,000.0	4,805,912,000,000.0
GDP growth (annual %)	3.1	1.1	5.1	-0.1	7.5	3.9	1.9
GDP per capita, PPP (constant 2011 international $)	11,502.8	11,470.4	13,679.0	[illegible]0,527.6	14,405.9	14,827.1	14,970.5
GDP, PPP (constant 2011 international $)	2,082,524,357,036.5	2,106,271,778,913.6	2,664,250,430,852.8	2,660,889,[illegible]7,949.3	2,861,222,530,432.3	2,973,103,637,563.7	3,030,052,207,414.5
GDP, PPP (current international $)	1,714,202,489,964.3	1,768,321,815,260.6	2,559,422,271,342.5	2,575,606,[illegible]8,493.5	2,803,343,921,839.3	2,973,103,637,563.7	3,084,448,467,470.8
General government final consumption expenditure (constant 2005 US$)	156,450,215,357.3	158,948,719,684.9	185,232,313,908.6	190,691,[illegible]2,004.7	198,163,280,050.7	202,614,855,351.4	207,234,256,299.6
General government final consumption expenditure (constant LCU)	238,423,210,135.4	242,230,820,249.3	282,285,855,612.3	290,606,[illegible]1,213.9	301,992,076,218.7	308,776,080,132.9	315,815,842,912.8
GNI (constant LCU)	1,203,015,983,052.6	1,216,262,202,716.8	1,528,179,675,058.3	1,527,55[illegible]3,396.8	1,696,416,804,309.3	1,761,809,152,923.3	1,765,229,077,529.4
GNI (constant 2005 US$)	773,671,362,445.2	782,190,136,060.2	982,787,317,807.1	982,385,[illegible]2,409.9	1,090,982,263,539.5	1,133,036,723,462.2	1,135,236,110,475.1
GNI growth (annual %)	3.3	1.1	4.4	0.0	11.1	3.9	0.2



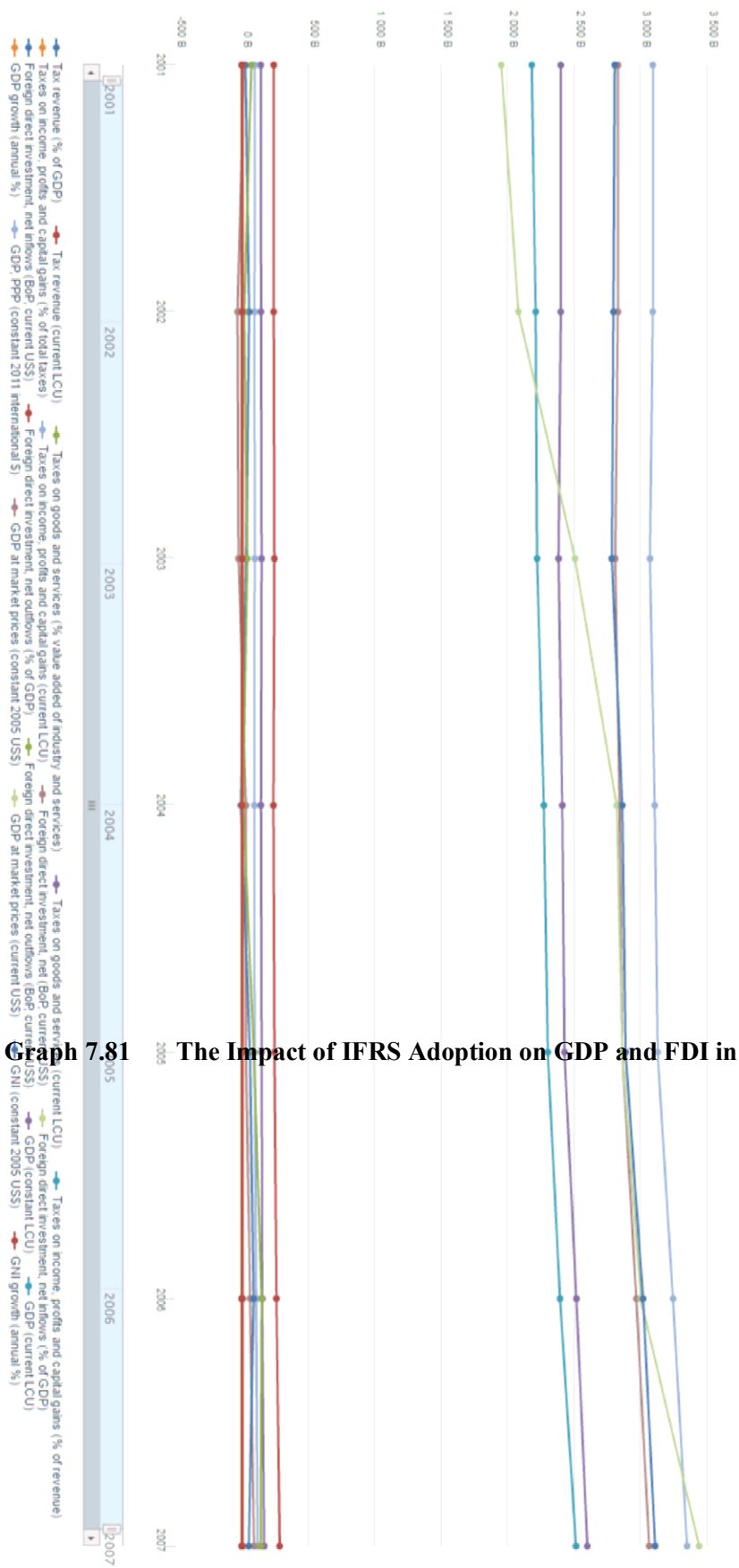
Graph 7.71 The Impact of IFRS Convergence on GDP and FDI in Brazil

7.7 Brazil – Analysis of the Impact of IFRS Convergence on GDP and FDI

Brazil is frequently referred to as a label adopter, to imply that though they accept IFRS in the view of the public, usage and enforcement are often lax within the country. The economic data presented actually helps to demonstrate this fact. Brazil made its move towards IFRS adoption in 2008, passing legislation which enabled the government to implement necessary changes. With these moves came a large influx of investment inflow and outflows, with the official adoption in 2010 boosting the Brazilian economy through investment and tax revenues. The GNI saw an incredible 11% gain. Despite the increase in funding the government expenditures did not increase as the government had not reinvested in infrastructure for its citizens. While this data demonstrates continued growth of FDI and tax revenue, it would be valuable to reassess this situation including years through 2016, which saw the Brazilian government declare economic poverty and a slew of government corruption cases which further fueled by social unrest and anger at the massive spending on the Olympic Games. Though somewhat speculation without further data, the lax application of IFRS standards, coupled with serious bouts of corruption, economic emergency and social unrest will likely disillusion investors to a large degree and see this trend of growth reversed.

Table 7.81 The Impact of IFRS Adoption on GDP and FDI in Germany

	2001	2002	2003	2004	2005	2006	2007
Tax revenue (% of GDP)	10.9	10.8	11.0	10.4	10.6	10.8	11.3
Tax revenue (current LCU)	238,150,991,872.0	238,204,993,536.0	243,240,992,768.0	23[illegible]896,995,840.0	243,863,994,368.0	258,820,997,120.0	283,300,003,840.0
Taxes on goods and services (% value added of industry and services)	7.3	7.2	7.4	7.0	7.2	7.1	7.4
Taxes on goods and services (current LCU)	141,207,994,368.0	143,435,005,952.0	147,799,998,464.0	1[illegible]870,003,712.0	148,024,000,512.0	152,392,007,680.0	166,968,999,936.0
Taxes on income, profits and capital gains (% of revenue)	15.2	14.8	14.6	14.6	14.8	15.9	16.7
Taxes on income, profits and capital gains (% of total taxes)	40.7	39.8	39.2	39.4	39.3	41.1	41.1
Taxes on income, profits and capital gains (current LCU)	96,942,997,504.0	94,770,003,968.0	95,441,002,496.0	[illegible]027,000,320.0	95,840,002,048.0	106,428,997,632.0	116,331,003,904.0
Foreign direct investment, net (BoP, current US$)	13,299,769,038.2	-34,010,148,147.8	-26,045,291,746.7	[illegible]524,265,381.4	29,126,709,051.9	60,497,713,147.4	89,824,274,898.3
Foreign direct investment, net inflows (% of GDP)	1.3	2.6	1.2	-0.3	2.1	2.9	1.5
Foreign direct investment, net inflows (BoP, current US$)	26,171,197,397.9	53,605,269,463.4	30,933,978,207.1	[illegible]802,914,899.9	59,855,937,202.0	87,440,493,960.1	50,844,402,917.3
Foreign direct investment, net outflows (% of GDP)	3.6	0.8	1.6	0.3	3.1	4.9	4.1
Foreign direct investment, net outflows (BoP, current US$)	70,230,616,145.6	17,212,968,424.1	39,302,706,430.5	[illegible]079,406,558.5	88,983,834,659.8	147,939,462,999.7	140,669,950,878.0
GDP (constant LCU)	2,398,681,780,000.0	2,398,681,780,000.0	2,381,653,390,000.0	2[illegible]518,030,000.0	2,426,546,430,000.0	2,516,332,520,000.0	2,598,378,430,000.0
GDP (current LCU)	2,179,850,000,000.0	2,209,290,000,000.0	2,220,080,000,000.0	2[illegible]620,000,000.0	2,300,860,000,000.0	2,393,250,000,000.0	2,513,230,000,000.0
GDP growth (annual %)	1.7	0.0	-0.7	1.2	0.7	3.7	3.3
GDP, PPP (constant 2011 international $)	3,091,671,722,476.0	3,091,671,722,476.0	3,069,723,754,103.9	[illegible]638,613,783.6	3,127,586,595,044.8	3,243,312,289,815.6	3,349,061,631,811.2
GDP at market prices (constant 2005 US$)	2,828,551,970,217.5	2,828,551,970,217.5	2,808,471,905,206.1	2[illegible]330,195,550.7	2,861,410,272,354.2	2,967,287,018,442.5	3,064,036,459,036.8
GDP at market prices (current US$)	1,950,648,769,574.9	2,079,136,081,310.0	2,505,733,634,311.5	2[illegible]245,095,604.7	2,861,410,272,354.2	3,002,446,368,084.3	3,439,953,462,907.2
GNI (constant 2005 US$)	2,804,608,620,064.5	2,794,286,465,017.5	2,782,741,275,409.2	[illegible]372,963,945.4	2,886,828,752,642.7	3,018,257,990,487.6	3,108,968,105,950.7
GNI growth (annual %)	1.5	-0.4	-0.4	2.8	0.9	4.6	3.0



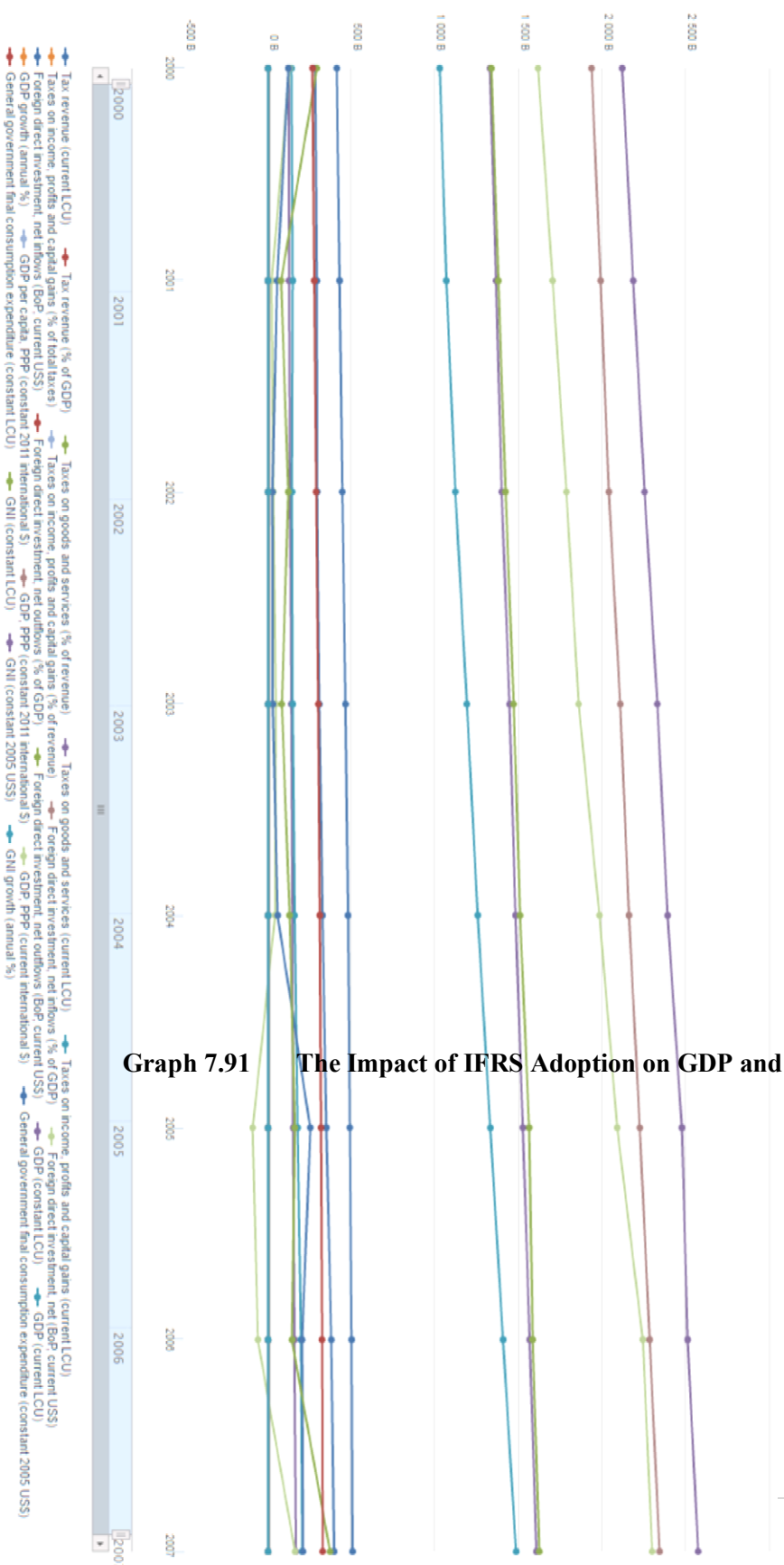
Graph 7.81 The Impact of IFRS Adoption on GDP and FDI in Germany

7.8 Germany – Analysis of the Impact of IFRS Adoption on GDP and FDI

As a member of the EU, Germany had the option voluntary adoption as early as 2002. However it wasn't until the mandatory adoption in 2005 that the majority of companies implemented and the economic effects truly registered. In 2005, FDI inflows doubled why outflows increased nearly tenfold, ultimately stabilizing get more than double pre-IFRS levels in the five-year period prior to 2005. with these increases, GDP increased notably however not as substantially as one might have expected. As an explanation, further examination of Germany's tax revenues and government expenditures would likely provide instructive insight. Though large sums of funds or exchange the government level no new taxes appear to have been implemented. In fact, tax revenue levels remained fairly consistent and government expenditures seem to have remained tied to this figure. The potential to increase taxes and enhance infrastructure went unutilized ultimately helping companies but doing little for the economy.

Table 7.91 The Impact of IFRS Adoption on GDP and FDI in the UK

	2000	2001	2002	2003	2004	2005	2006	2007
Tax revenue (current LCU)	281,878,003,712.0	291,874,996,224.0	294,065,995,776.0	305,969,987,[illegible].0	325,935,988,736.0	348,293,988,352.0	377,919,012,864.0	394,792,009,728.0
Tax revenue (% of GDP)	27.4	27.4	26.2	[illegible].7	26.0	26.2	26.9	26.6
Taxes on goods and services (% of revenue)	33.3	32.2	33.5	[illegible].6	32.7	31.1	30.6	30.7
Taxes on goods and services (current LCU)	123,320,999,936.0	125,013,999,616.0	130,605,998,080.0	138,110,992,[illegible].0	145,832,001,536.0	148,765,999,104.0	157,105,995,776.0	165,797,003,264.0
Taxes on income, profits and capital gains (current LCU)	140,003,000,320.0	147,318,996,992.0	142,948,007,936.0	147,210,993,[illegible].0	158,658,002,944.0	176,855,007,232.0	196,654,006,272.0	203,859,001,344.0
Taxes on income, profits and capital gains (% of total taxes)	49.7	50.5	48.6	[illegible].1	48.7	50.8	52.0	51.6
Taxes on income, profits and capital gains (% of revenue)	37.8	37.9	36.7	[illegible].8	35.6	36.9	38.3	37.8
Foreign direct investment, net inflows (% of GDP)	7.9	3.5	1.5	[illegible].4	2.5	10.4	7.9	7.1
Foreign direct investment, net (BoP, current US$)	127,916,379,256.2	21,321,018,557.6	31,141,421,728.0	46,063,225,[illegible].0	41,580,064,154.1	-92,742,954,100.2	-61,381,481,565.7	160,880,316,709.8
Foreign direct investment, net inflows (BoP, current US$)	122,156,843,233.7	53,842,147,220.9	25,531,788,976.3	27,612,199,[illegible].2	57,333,717,392.5	252,653,397,148.1	203,636,431,868.2	209,514,959,646.9
Foreign direct investment, net outflows (% of GDP)	18.8	5.0	7.2	[illegible].2	5.6	6.6	5.5	12.5
Foreign direct investment, net outflows (BoP, current US$)	292,046,714,700.3	77,411,943,368.4	120,902,004,481.2	82,074,465,[illegible].8	128,639,685,536.4	159,910,443,047.9	142,254,950,302.5	370,395,276,356.7
GDP (constant LCU)	1,327,741,361,300.0	1,364,360,939,000.0	1,398,386,931,100.0	1,445,046,412,[illegible].0	1,481,005,787,200.0	1,525,382,026,500.0	1,565,984,989,300.0	1,606,481,934,000.0
GDP (current LCU)	1,027,568,000,000.0	1,067,019,000,000.0	1,121,067,000,000.0	1,190,103,000,[illegible].0	1,255,107,000,000.0	1,330,418,000,000.0	1,406,620,000,000.0	1,484,273,000,000.0
GDP growth (annual %)	3.8	2.8	2.5	[illegible].3	2.5	3.0	2.7	2.6
GDP per capita, PPP (constant 2011 international $)	32,898.3	33,675.7	34,369.8	35,[illegible].6	36,025.8	36,851.3	37,555.2	38,227.5
GDP, PPP (constant 2011 international $)	1,937,463,338,087.3	1,990,899,264,178.0	2,040,550,584,952.8	2,108,636,913,[illegible].0	2,161,109,459,891.9	2,225,864,041,794.6	2,285,112,592,857.1	2,344,206,440,460.0
GDP, PPP (current international $)	1,616,069,350,343.8	1,703,917,983,440.2	1,786,199,446,486.5	1,859,890,479,[illegible].2	1,984,544,012,801.2	2,091,283,345,882.3	2,244,393,881,855.9	2,299,790,051,054.0
General government final consumption expenditure (constant 2005 US$)	410,825,836,963.9	427,353,135,920.3	444,199,483,004.1	462,678,060,[illegible].7	477,961,535,077.1	488,769,090,909.1	499,422,517,341.0	505,045,158,995.9
General government final consumption expenditure (constant LCU)	265,724,560,900.0	276,414,514,800.0	287,310,830,900.0	299,262,883,[illegible].0	309,148,324,200.0	316,138,714,700.0	323,029,413,400.0	326,666,171,000.0
GNI (constant LCU)	1,337,099,089,919.9	1,378,749,295,679.5	1,422,021,059,078.3	1,470,282,286,[illegible].0	1,508,951,454,979.2	1,563,055,864,116.2	1,584,481,922,344.1	1,624,337,579,179.4
GNI (constant 2005 US$)	2,120,016,038,806.9	2,186,053,855,222.8	2,254,662,706,372.5	2,331,182,522,[illegible].4	2,392,493,802,780.6	2,478,278,181,818.2	2,512,249,925,149.7	2,575,442,423,271.3
GNI growth (annual %)	4.6	3.1	3.1	[illegible].4	2.6	3.6	1.4	2.5



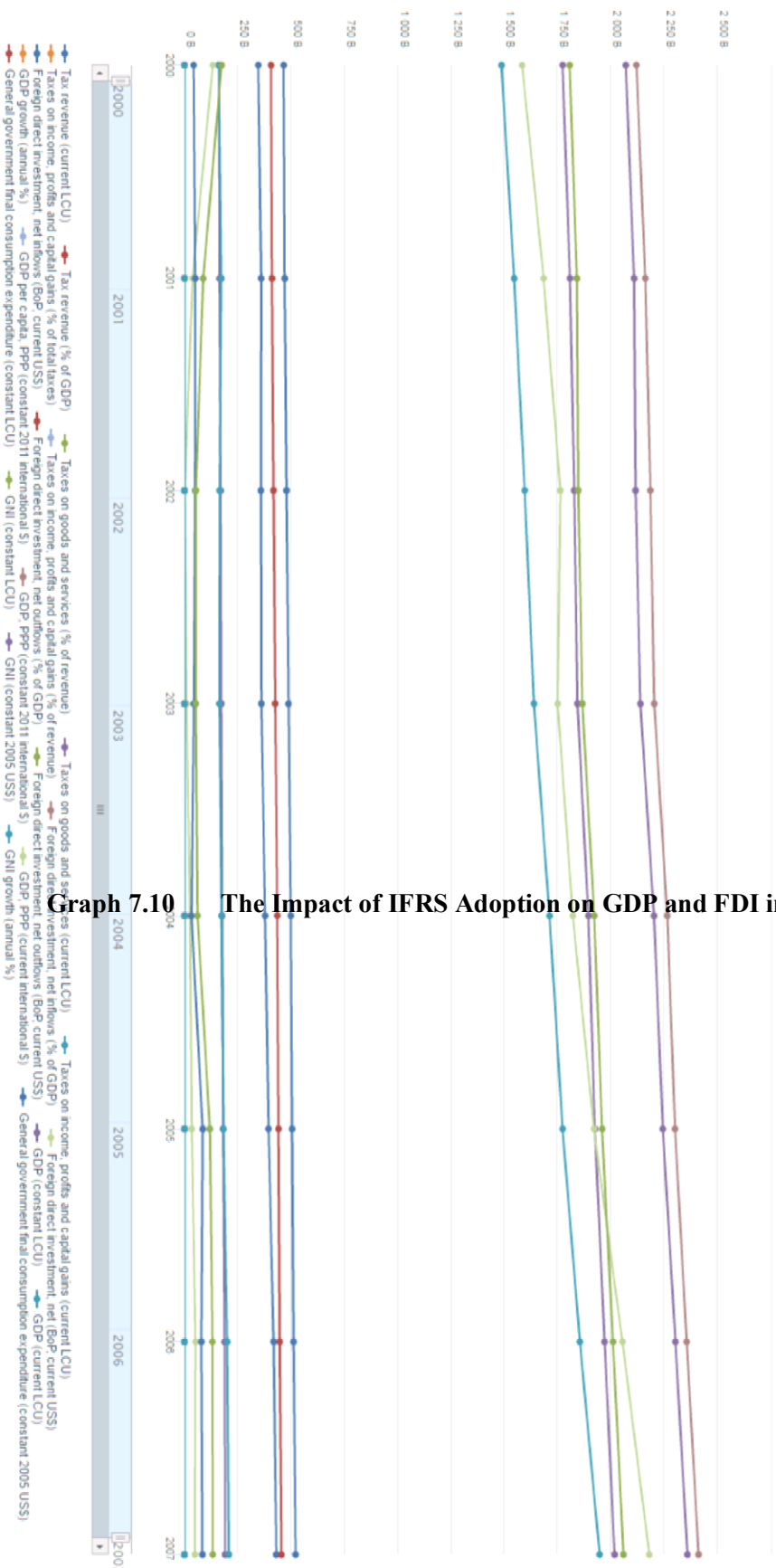
Graph 7.91 The Impact of IFRS Adoption on GDP and FDI in the UK

7.9 UK – Analysis of the Impact of IFRS Adoption on GDP and FDI

As one of the leading bodies in the development of IFRS, one might expect the UK to be one of the first early adopters. That said, the economic data indicates that like most EU countries the UK hesitated until the mandatory implementation. In 2005 the implementation of IFRS FDI net inflows increased nearly 450% and ultimately stabilized nearly 3.5 times higher than pre IFRS investment levels. Taking into consideration the five-year period preceding the mandatory implementation, the highest level is still half that of the stabilized FDI inflows following IFRS implementation. With the substantial increase in FDI inflows tax revenues substantially increased due to taxes on goods and services, income, profits and capital gains. While it is certainly true that FDI inflows experienced a massive gain, in this instance FDI outflows were not largely affected by the implementation of IFRS standards in 2005. As one of the leading economies in the world, the UK already engaged in significant cross-border investment. Despite the increases in revenues and FDI inflows the UK's GDP did not experience abnormal increases. Similar to the instance Germany, the increase in tax revenues did not result in equivalent government expenditures and infrastructure development which likely held back further growth.

Table 7.10 The Impact of IFRS Adoption on GDP and FDI in France

	2000	2001	2002	2003	2004	2005	2006	2007
Tax revenue (current LCU)	345,296,011,264.0	359,128,006,656.0	357,934,989,312.0	360,218,0[illegible]408.0	377,367,986,176.0	393,677,012,992.0	417,121,009,664.0	429,944,012,800.0
Tax revenue (% of GDP)	23.2	23.3	22.5	22.0	22.1	22.2	22.5	22.1
Taxes on goods and services (% of revenue)	25.4	24.5	24.9	24.9	24.5	24.0	23.6	23.0
Taxes on goods and services (current LCU)	161,543,995,392.0	163,676,995,584.0	169,016,999,936.0	172,008,99[illegible]864.0	176,356,999,168.0	180,917,993,472.0	187,318,992,896.0	189,817,995,264.0
Taxes on income, profits and capital gains (current LCU)	161,295,007,744.0	172,036,997,120.0	164,424,007,680.0	163,448,9[illegible]840.0	173,047,005,184.0	182,805,004,288.0	199,945,994,240.0	207,424,995,328.0
Taxes on income, profits and capital gains (% of total taxes)	46.7	47.9	45.9	45.4	45.9	46.4	47.9	48.2
Taxes on income, profits and capital gains (% of revenue)	25.3	25.8	24.2	23.7	24.0	24.2	25.2	25.2
Foreign direct investment, net inflows (% of GDP)	3.1	3.6	3.3	2.3	1.5	3.9	3.4	3.1
Foreign direct investment, net (BoP, current US$)	132,183,860,805.3	37,219,712,115.2	1,454,669,857.1	10,229,9[illegible]526.4	25,489,612,676.8	33,679,643,404.6	51,416,740,927.0	48,464,051,602.6
Foreign direct investment, net inflows (BoP, current US$)	42,379,454,823.7	50,342,933,495.9	49,568,692,710.5	43,061,94[illegible]521.5	32,828,926,514.2	85,179,159,787.3	78,945,704,919.9	83,780,962,091.3
Foreign direct investment, net outflows (% of GDP)	12.7	6.3	3.5	2.8	2.9	5.4	5.6	5.0
Foreign direct investment, net outflows (BoP, current US$)	173,566,128,442.5	87,346,327,059.2	52,947,908,032.4	52,554,85[illegible]284.3	61,070,815,169.1	118,858,803,191.9	130,362,445,846.9	132,245,013,693.9
GDP (constant LCU)	1,771,701,000,000.0	1,806,328,000,000.0	1,826,531,000,000.0	1,841,500,0[illegible]000.0	1,892,812,000,000.0	1,923,243,000,000.0	1,968,919,000,000.0	2,015,415,000,000.0
GDP (current LCU)	1,485,303,000,000.0	1,544,629,000,000.0	1,594,259,000,000.0	1,637,438,0[illegible]000.0	1,710,760,000,000.0	1,771,978,000,000.0	1,853,267,000,000.0	1,945,670,000,000.0
GDP growth (annual %)	3.9	2.0	1.1	0.8	2.8	1.6	2.4	2.4
GDP per capita, PPP (constant 2011 international $)	34,773.4	35,196.0	35,331.7	35,[illegible]369.7	36,088.6	36,393.4	36,998.9	37,639.0
GDP, PPP (constant 2011 international $)	2,118,136,592,958.6	2,159,534,501,411.8	2,183,687,963,868.2	2,201,583,9[illegible]297.3	2,262,929,445,087.6	2,299,310,874,380.9	2,353,918,286,703.9	2,409,506,040,521.4
GDP, PPP (current international $)	1,582,031,574,529.9	1,682,886,544,024.3	1,761,670,552,615.0	1,748,670,9[illegible]749.7	1,820,209,177,865.0	1,919,108,361,654.6	2,052,871,834,181.1	2,178,752,995,453.6
General government final consumption expenditure (constant 2005 US$)	464,138,766,638.1	469,140,679,242.0	477,671,197,164.4	486,931,49[illegible]823.0	497,660,517,162.8	503,998,258,923.0	510,798,843,718.5	520,049,976,168.5
General government final consumption expenditure (constant LCU)	405,131,000,000.0	409,497,000,000.0	416,943,000,000.0	425,026,0[illegible]000.0	434,391,000,000.0	439,923,000,000.0	445,859,000,000.0	453,934,000,000.0
GNI (constant LCU)	1,804,911,498,604.6	1,838,895,634,961.9	1,845,200,024,175.7	1,864,666,3[illegible]433.4	1,920,422,399,671.9	1,956,848,222,959.3	2,008,328,969,947.9	2,057,288,554,286.7
GNI (constant 2005 US$)	2,068,115,545,316.9	2,107,055,471,595.2	2,114,279,208,242.1	2,136,584,2[illegible]437.1	2,200,471,004,482.3	2,242,208,680,512.4	2,301,196,688,076.1	2,357,295,880,497.2
GNI growth (annual %)	3.7	1.9	0.3	1.1	3.0	1.9	2.6	2.4



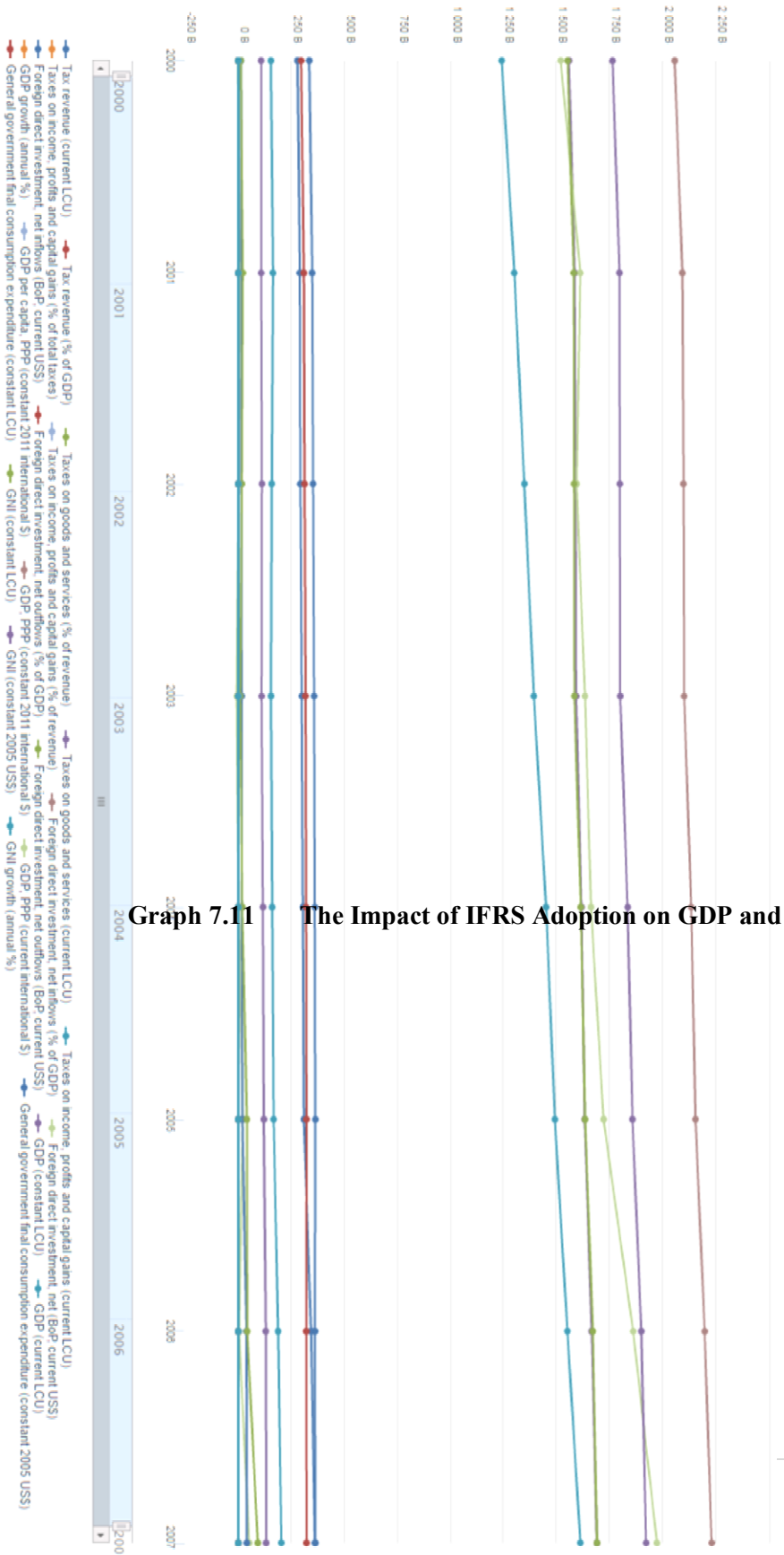
Graph 7.10 The Impact of IFRS Adoption on GDP and FDI in France

7.10 France – Analysis of the Impact of IFRS Adoption on GDP and FDI

Consistent with the other EU countries, the effects on France's GDP and FDI were not notable until after the mandatory adoption of IFRS. But in the years following mandatory adoption France's FDI inflows more than doubled stabilizing and the point more than 60% higher than any point in the five-year period preceding mandatory adoption. The consistency and reliability afforded by IFRS encouraged growth and open up markets with a single set of unified standards. Though there have been unquestionable increases in FDI tax revenue growth has remained fairly consistent fluctuating between 3 to 6% in the years following mandatory adoption. Similarly government expenditures appear to be tied to this figure and without further tax revenue and government investment GDP growth remained fairly consistent with pre-IFRS levels. Similar to Germany this is not an unexpected from a social democracy. More notable than the increases to FDI inflows is that of FDI outflows. Following implementation outflows more than doubled over any year in the three years preceding mandatory implementation, however without the appropriate capital gains taxes and increased government revenue GDP growth was relatively low.

Table 7.11 The Impact of IFRS Adoption on GDP and FDI in Italy

	2000	2001	2002	2003	2004	2005	2006	2007
Tax revenue (current LCU)	278,976,004,096.0	289,407,991,808.0	291,768,008,704.0	298,640,[illegible]360.0	303,685,009,408.0	309,157,003,264.0	342,585,016,320.0	360,164,098,048.0
Tax revenue (% of GDP)	22.5	22.3	21.7	21.5	21.0	20.7	22.1	22.4
Taxes on goods and services (% of revenue)	23.9	22.8	23.1	22.2	22.8	23.1	23.2	22.2
Taxes on goods and services (current LCU)	107,567,996,928.0	107,906,998,272.0	111,501,000,704.0	109,918,[illegible]200.0	116,141,998,080.0	120,320,999,424.0	129,550,000,128.0	131,572,998,144.0
Taxes on income, profits and capital gains (current LCU)	153,566,003,200.0	163,508,994,048.0	157,688,004,608.0	154,092,[illegible]560.0	159,813,992,448.0	166,555,992,064.0	187,759,001,600.0	202,551,099,392.0
Taxes on income, profits and capital gains (% of total taxes)	55.0	56.5	54.0	51.6	52.6	53.9	54.8	56.2
Taxes on income, profits and capital gains (% of revenue)	34.1	34.6	32.7	31.1	31.4	32.0	33.6	34.1
Foreign direct investment, net inflows (% of GDP)	1.2	1.3	1.2	1.1	0.9	1.1	2.0	1.8
Foreign direct investment, net (BoP, current US$)	-1,098,938,565.9	6,884,391,906.1	2,547,622,201.6	-7,551,[illegible]523.0	2,456,936,623.9	21,143,749,852.3	3,470,637,067.8	52,075,789,758.4
Foreign direct investment, net inflows (BoP, current US$)	13,176,403,310.9	14,873,909,552.7	14,699,160,476.6	16,537,[illegible]207.4	16,791,130,464.5	19,636,818,499.0	39,007,009,353.9	40,042,891,549.6
Foreign direct investment, net outflows (% of GDP)	1.1	1.9	1.4	0.6	1.1	2.2	2.2	4.2
Foreign direct investment, net outflows (BoP, current US$)	12,077,464,745.0	21,758,301,458.9	17,246,782,678.2	8,986,[illegible]684.4	19,248,067,088.5	40,780,568,351.3	42,477,646,421.7	92,118,681,308.0
GDP (constant LCU)	1,556,220,962,100.0	1,583,809,721,900.0	1,587,781,574,000.0	1,590,205,[illegible]000.0	1,615,382,551,400.0	1,630,722,486,400.0	1,663,441,382,700.0	1,687,962,524,100.0
GDP (current LCU)	1,239,758,827,800.0	1,299,411,786,700.0	1,346,360,236,500.0	1,391,312,[illegible]700.0	1,449,016,004,100.0	1,490,409,362,800.0	1,549,188,035,300.0	1,610,304,860,800.0
GDP growth (annual %)	3.7	1.8	0.3	0.2	1.6	0.9	2.0	1.5
GDP per capita, PPP (constant 2011 international $)	36,072.8	36,691.7	36,728.9	36,[illegible]621.9	36,961.7	37,129.8	37,761.1	38,124.8
GDP, PPP (constant 2011 international $)	2,054,060,068,857.6	2,090,474,544,201.8	2,095,717,002,051.1	2,098,916,[illegible]460.0	2,132,147,603,437.1	2,152,394,823,279.1	2,195,580,579,044.9	2,227,946,096,936.8
GDP, PPP (current international $)	1,517,552,968,984.5	1,609,982,178,969.8	1,592,528,517,085.5	1,631,958,[illegible]770.9	1,660,411,264,201.9	1,719,744,120,205.9	1,858,758,724,607.2	1,970,992,556,689.0
General government final consumption expenditure (constant 2005 US$)	334,003,818,604.8	348,133,314,123.7	352,187,933,948.4	356,918,[illegible]884.5	360,353,853,752.8	362,661,360,527.3	361,297,091,895.7	362,575,851,367.8
General government final consumption expenditure (constant LCU)	296,139,422,300.0	308,667,125,300.0	312,262,092,500.0	316,456,[illegible]700.0	319,502,281,500.0	321,548,197,400.0	320,338,589,300.0	321,472,382,000.0
GNI (constant LCU)	1,549,992,608,644.7	1,578,579,731,027.8	1,580,312,393,347.7	1,581,932,[illegible]245.0	1,612,105,786,887.2	1,632,541,809,827.0	1,669,140,817,306.9	1,688,747,258,363.6
GNI (constant 2005 US$)	1,761,742,900,024.9	1,794,235,416,189.0	1,796,204,783,993.2	1,798,046,[illegible]445.8	1,832,341,592,016.3	1,855,569,456,535.3	1,897,168,391,405.1	1,919,453,341,755.0
GNI growth (annual %)	3.5	1.8	0.1	0.1	1.9	1.3	2.2	1.2



Graph 7.11 The Impact of IFRS Adoption on GDP and FDI in Italy

7.11 Italy – Analysis of the Impact of IFRS Adoption on GDP and FDI

Though Italy is a member of the EU and one for the largest economies in the world, it is still relatively small compared to other larger EU partners. That said, the gains experienced by Italy with the mandatory adoption of IFRS are notable not for their large cash value so much as value when compared to historic data. In the five years leading up to 2005 and the mandatory implementation of IFRS, Italy experienced approximately 1 to 2% of tax revenue growth annually. In the year following the adoption of IFRS there is a 10% increase in tax revenue with a 6% increase in the year following that. FDI inflows increased approximately 50% over any. In the five years preceding mandatory implementation. Similarly FDI outflows also doubled and then 2007 doubled again. These figures did lead to modest GDP growth of 1 to 2% on average however this lacks considerably compared to what might have been expected. Inspection of the government expenditures in the years following mandatory IFRS adoption revealed a stagnant level of government spending extremely disproportionate to the revenue inflows being brought in. Whereas in the years preceding mandatory IFRS adoption annual increases in government spending more easily notable in the three-year period following mandatory adoption the shift was insubstantial which unquestionably had an impact on growth in the country.

7.12 Summary

First and foremost it is important to point out that there are extreme limitations to any analysis of FDI in GDP. Macroeconomic data is difficult to obtain in process as it requires cooperation with companies and governments. Date is not always presented in a timely manner and for some years is not present at all. In some cases data is misrepresented. Just as in any instance of business transaction, there is game theory at work and information asymmetry often substantial. Furthermore the calculation of the country's GDP is very complex figure. This research is utilized a more simple form of GDP calculation as a means of demonstrating the basics of what affect growth. In reality there are hundreds of factors at play and a number of them are not available to outside researchers.

In conclusion of this chapter, it is put forth that the information presented in the previous sections as demonstrated an unquestionable correlation between IFRS implementation, GDP growth, FDI inflows and outflows, tax revenues and government expenditures. While the GDP calculations themselves are not always significantly impacted as a standing figure, the components that comprise those GDP calculations are being significantly affected. In instances where notable growth is not easily recognizable, there are other factors which clearly offset what would've otherwise been recognized as growth. As mentioned above there is significant information asymmetry especially from a researcher's perspective. Why a governments tax revenue should increase substantially but its expenditures should remained relatively unaffected is not information readily available to any research, nor is the data that would lightly be handed out by government entities. That aside, unquestionable shifts in the relevant data indicate that IFRS definitely has the potential to impact both GDP and FDI and in most cases does.

CHAPTER 8: THE IMPACT OF IFRS ON FINANCIAL RATIOS and Conclusion

8.1 Description

Firstly, the purpose of this chapter is not to do in-depth analysis of the financial ratios calculated within. The primary purpose was simply to demonstrate that the accounting differences between IFRS and GAAP do in fact affect financial ratios. For this specific section, the ratio calculations were limited to the EU countries. This option was elected primarily because the EU countries from this study implemented IFRS at the same time and have thorough data from the same year periods, making data more comparable. For all EU countries, voluntary adoption began in 2002 with mandatory implementation taking place in 2005.

The period of financial data analyzed for financial ratio calculation was for the fiscal year 2012. The fiscal year selection was actually a result of trying to obtain as recent data as possible for the entirety of the research. It was more than sufficient for this chapter because although EU countries do utilize IFRS for listed companies they also still report using local GAAP for statutory filing to their governments. The statutory filing information for GAAP accounting was obtained from Thompson REUTERS DataStream. REUTERS DataStream staff was contacted to ensure that the data being collected had not been prepared using IFRS, but rather Statutory GAAP. After verification of that data, 2012 fiscal annual reports for each of the 120 companies sampled from the EU were obtained, they were then analyzed and consolidated IFRS financial statements were used to calculate the financial ratios under IFRS. The same data was generally calculated in the DataStream reports however in examples where the financial information was unavailable, new calculations using data from annual reports was not input. Those ratios were simply omitted and not compared to avoid data contamination.

As mentioned above, the purpose of this was not to do in-depth analysis but rather simply to show the variations that occur. That said descriptions of each of the ratios calculated in the study have been

provided below to allow readers to more easily analyze the effect that occurs when one standard is implemented over another. In the following pages, figures from the four EU countries in this study, Germany, the UK, France and Italy, will be presented. This study does not perform a individual breakdown for each of the companies but rather highlights which changes occur via up arrows for increases or down arrows for decreases between IFRS and GAAP calculations. In instances where no change occurred or data was omitted, no arrows are present and dashes are input to clarify this fact.

The ratios for calculation were selected because they are among the most frequently sought out by investors to analyze the liquidity of a company and the quality of the leadership and management guiding it. In several instances, ratios such as the current and quick ratio could not be computed due to the fact that financial institutions and insurance institutions tend to deal with long-term assets and liabilities and rarely deal with inventories. How significantly anyone countries affected by the differences between IFRS and gap wording will depend greatly on the makeup of that companies upper-level corporations. Banking and insurance institutions rely on financing and have substantial debt. Affecting the way this data is reported can easily affect the outlook of that company. On the other hand and factoring institutions rely more heavily on inventory which financial and insurance institutions don't utilize. Therefore they will be affected in a different manner and results in different outlooks to investors.

8.2 Financial Ratios

Current Ratio

The current ratio, derived by dividing current assets by current liabilities, is a popular financial ratio for testing a company's liquidity or working capital. It derives the proportion of current assets available to cover current liabilities. This ratio ascertains whether a company's short-term assets are available to pay off its short-term liabilities. Higher current ratios are generally considered to be better.

Quick Ratio

The quick ratio indicates a company's short-term liquidity. The quick ratio measures a company's ability to meet its short-term obligations with its most liquid assets. It is often considered more conservative than the current ratio. For this reason, the ratio excludes inventories from current assets, and is calculated by subtracting inventories from current assets and then dividing by current liabilities.

The quick ratio measures the dollar amount of liquid assets available for each dollar of current liabilities. A quick ratio of 1.5 means that a company has $1.50 of liquid assets available to cover each $1 of current liabilities. The higher the quick ratio, the better the company's liquidity position is.

Debt Equity Ratio

The debt-equity ratio is a leverage ratio that compares the company's total liabilities to its total shareholders' equity. It measures how much suppliers, lenders, creditors and such have committed to the company in comparison to what the shareholders have committed. Lower percentages indicate that a company is using less leverage and has a stronger equity position.

Return on Equity

ROE gauges the profit-generating efficiency of a company and helps investors determine whether a company operates well. Firms that are able to sustain profit from their operations typically have a competitive advantage - a feature that normally translates into superior returns for investors. The relationship between the company's profit and the investor's return makes ROE a particularly valuable metric to examine. It is calculated by dividing the company's net income by its shareholder equity. Generally speaking a company that has steadily increasing ROE is able to grow profits without dumping additional capital into the business.

It indicates management is operating efficiently and informs shareholders how well management is employing the investors' capital.

Return on Assets

ROA is an indicator of how profitable a company is relative to its total assets. ROA indicates how efficiently management uses assets to generate earnings. It is calculated by dividing a company's annual earnings by its total assets to show the "return on investment". I.e. ROA reveals how much profit a company earns for every dollar of its assets.

	Forbes	COMPANY	CURRENT RATIO			QUICK RATIO			DEBT EQUITY			RETURN ON EQUITY			RETURN ON ASSETS		
	Ranking	NAME	IFRS		GAAP	IFRS		GAAP	IFRS		GAAP	IFRS		GAAP	IFRS		GAAP
1	14	Volkswagen Group	1.07		1.07	0.8	▲	0.75	2.77	▼	2.84	0.08	▼	0.28	0.02	▼	0.07
2	25	Allianz	-		-	-		-	11.92	▼	14.51	0.1	▼	0.12	0.01		0.01
3	36	Daimler	1.15	▲	1.15	0.85	▲	0.83	2.58	▼	2.63	0.12	▼	0.14	0.03	▼	0.04
4	51	Siemens	1.22		1.22	0.85	▲	0.73	2.5	▲	2.38	0.15		0.15	0.04		0.04
5	55	BMW Group	1.04		1.04	0.84	▲	0.77	3.35	▲	3.28	0.36	▲	0.17	0.11	▲	0.04
6	69	BASF	1.66	▼	1.69	1.09	▲	0.86	0.67	▼	1.53	0.19	▼	0.2	0.08		0.08
7	81	Munich Re	-		-	-		-	8.42	▼	10.59	0.2	▲	0.15	0.02	▲	0.01
8	99	E.ON	1.2		1.2	1.07	▲	0.82	2.62	▼	2.69	0.07	▲	0.06	0.02		0.02
9	120	Bayer	1.45		1.45	0.92	▲	0.9	1.76	▲	1.69	0.13		0.13	0.05		0.05
10	177	RWE Group	1.02	▼	1.02	0.9	▲	0.78	4.37	▼	5.85	0.08	▼	0.11	0.01	▼	0.02
11	190	Deutsche Post	1.12	▲	0.97	1.09	▲	0.82	1.81	▲	1.73	0.15	▲	0.14	0.05		0.05
12	211	SAP	1.05	▼	1.05	1.04	▲	1.02	0.89	▲	0.85	0.18	▼	0.2	0.12	▲	0.11
13	235	Continental	0.99		0.99	-0.54	▼	0.7	1.99	▼	2	0.21		0.21	0.07		0.07
14	271	Linde	0.98		0.98	0.82		0.82	1.45	▼	1.48	0.26	▲	0.1	0.11	▲	0.04
15	301	Deutsche Bank	-		-	-		-	36.26	▲	36.11	0.01	▲	0	0.39	▲	0
16	317	Henkel	1.31		1.31	1.06	▲	0.93	1.05	▲	1	0.16		0.16	0.08		0.08
17	329	Fresenius	1.56	▲	1.34	1.21	▲	0.91	1.37	▼	2.12	0.03	▼	0.12	0.01	▼	0.03
18	403	Deutsche Lufthansa	-		-	-		-	0.93	▼	2.44	0.09	▼	0.11	0.05	▲	0.03
19	413	Talanx	-		-	-		-	11.19	▼	20.48	0.15	▲	0.11	0.01		0.01
20	433	Deutsche Telekom	0.65		0.65	0.65	▲	0.55	2.53	▼	2.8	-0.16	▲	-0.2	-0.05		-0.05
21	451	Merck	1.45	▼	1.46	1.12	▲	1.11	1.08	▲	0.99	0.05		0.05	0.03		0.03
22	462	Porsche Automobil Holding	4.06	▼	5.24	4.06	▼	4.4	0.04		0.04	0.05	▼	0.26	0.05	▼	0.25
23	475	EnBW-Energie Baden	1.18	▼	1.25	1.06	▲	0.88	5.12	▲	4.73	0.09	▲	0.08	0.02	▲	0.01
24	570	Adidas	1.57		1.57	1.01	▲	0.92	1.2	▲	1.1	0.1		0.1	0.04	▼	0.05
25	595	HeidelbergCement	1.2	▲	1.18	1.2	▲	0.8	1.22	▲	1.1	0.11	▲	0.02	0.5	▲	0.01
26	654	Commerzbank	-		-	-		-	22.55	▼	23.08	0.02	▲	0	0		0
27	654	ThyssenKrupp Group	1.26		1.26	0.94	▲	0.91	3.25	▼	9.07	-0.45	▲	-1.31	-0.12	▲	-0.13
28	684	Deutsche Boerse	1		1	1			67.33	▼	72.39	0.2	▼	0.22	0		0
29	930	Metro Group	0.9	▲	0.87	0.55	▲	0.41	4.92	▲	4.64	0.09	▲	0	0.01	▲	0
30	473	Beiersdorf	2.15	▲	2.11	1.75	▲	1.54	0.69	▲	0.67	0.13		0.13	0.08		0.08

Figure 8.3

8.4 German Companies - IFRS and GAAP Financial Ratio Observations

Current Ratio: As it evidenced in the company table above, the current ratio was largely unaffected by the implementation of IFRS with only slight variations between the two standards.

Quick Ratio: The quick ratio which is actually more conservative, is more largely affected due to the differences in reporting of inventory and current assets. The differences change the liquidity outlook in the majority of the Germany companies sampled. This makes the companies appear more able to meet their short term obligations thereby decreasing risk for investors.

Debt Equity Ratio: IFRS reporting results in a lower D/E ratio for the majority of the firms sampled in this study, in many cases lowering the D/E ratio substantially indicating that the firms rely less on outside financing and thus have less liability to outside entities. This can help to convince investors of the investment worthiness of a company.

Return on Equity: The effect of IFRS on the German sample has a tendency towards slight increases in ROE which indicates to investors that management is efficiently implementing their capital and that the company does not have to seek infusion from other sources thus improving the company outlook in the eyes of investors.

Return on Assets: Similar to the Current Ratio, ROA was one of the least affected by the implementation of IFRS with a large number of firms experiencing no significant shift at all. The others samples were fairly evenly split which might be expected given that these companies are spread across a range of industries each of which is affected somewhat differently by IFRS reporting. That said it appears evident that generally speaking IFRS implementation has no notable adverse effect on ROA.

French Companies – IFRS and GAAP Ratio Change Comparison

	Forbes	COMPANY	CURRENT RATIO		QUICK RATIO		DEBT EQUITY		RETURN ON EQUITY		RETURN ON ASSETS	
	Ranking	NAME	IFRS	GAAP	IFRS	GAAP	IFRS	GAAP	IFRS	GAAP	IFRS	GAAP
1	22	BNP Paribas	-	-	-	-	21.22 ▲	21.02	0.09 ▲	0.07	0	0
2	23	Total	1.38	1.38	1.02 ▲	0.92	1.32 ▲	1.31	0.14 ▼	0.15	0.06	0.06
3	39	AXA Group	-	-	-	-	12.6 ▼	16.44	0.1	0.1	0.01	0.01
4	72	Sanofi	1.65	1.65	1.18 ▲	1.17	0.75 ▲	0.67	0.09	0.09	0.05	0.05
5	74	EDF	1.17	1.17	0.92 ▲	0.9	7.14 ▼	8.35	0.12 ▼	0.13	0.01	0.01
6	95	GDF Suez	1.07	1.07	0.98 ▲	0.76	1.89 ▼	2.22	0.04 ▲	0.03	0.01	0.01
7	146	Société Générale	-	-	-	-	22.12 ▼	23.92	0.02 ▲	0.01	0.13 ▲	0
8	162	Vinci	0.87	0.87	0.84 ▲	0.83	3.38 ▼	3.55	0.14	0.14	0.03	0.03
9	169	France Telecom	0.65	0.65	0.62 ▲	0.6	2.41 ▼	2.47	0.04 ▲	0.03	0.01	0.01
10	175	Renault	1.11 ▲	1.04	1.02 ▲	0.94	2.07 ▼	2.08	0.07	0.07	0.02	0.02
11	177	L'Oréal Group	1.29	1.29	0.97 ▲	0.89	0.41 ▲	0.38	0.11 ▼	0.14	0.08 ▼	0.1
12	196	Christian Dior	0.7 ▼	1.32	0.7 ▲	0.47	0.63 ▼	2.51	0.04 ▼	0.13	0.02 ▼	0.03
13	204	Schneider Electric	1.51	1.51	1.17 ▲	1.15	1.15 ▲	1.06	0.12 ▲	0.11	0.06 ▲	0.05
14	216	Carrefour	0.9	0.9	0.64 ▲	0.59	4.48 ▼	4.91	0.16	0.16	0.03	0.03
15	230	Danone	0.81	0.81	0.68 ▲	0.67	1.42 ▲	1.36	0.15 ▲	0.14	0.06	0.06
16	253	Natixis	-	-	-	-	12.68 ▼	27.8	0.04 ▼	0.05	0	0
17	260	Saint-Gobain	1.31	1.31	0.86 ▲	0.75	1.66 ▲	1.63	0.04	0.04	0.02	0.02
18	284	Air Liquide	1.05 ▲	1.03	0.89 ▲	0.79	1.41 ▲	1.39	0.16	0.16	0.06 ▼	0.07
19	294	CNP Assurances	-	-	-	-	21.66 ▼	34.42	0.14 ▲	0.09	0.01 ▲	0
20	356	Michelin Group	1.87	1.87	1.06 ▲	1	1.54 ▲	1.35	0.18	0.18	0.07 ▼	0.08
21	368	Safran	0.97 ▼	1.13	0.6 ▼	0.75	2.68 ▼	2.72	0.16 ▼	0.21	0.04 ▼	0.06
22	378	Kering	1.25	1.25	0.85 ▼	0.74	1.08 ▼	1.1	0.1 ▲	0.09	0.05 ▲	0.04
23	386	Alstom	0.92	0.92	0.76 ▲	0.52	6 ▲	5.81	0.17	0.17	0.02	0.02
24	390	Pernod Ricard	1.76	1.76	0.6 ▲	0.6	1.59 ▲	1.43	0.19 ▲	0.11	0.07 ▲	0.04
25	413	Lafarge	1.76 ▲	1	0.6 ▲	0.71	1.59 ▲	1.25	0.23 ▲	0.04	0.09 ▲	0.02
26	426	Bouygues	1.28 ▲	0.99	1.05 ▲	0.77	1.53 ▼	3.08	0.03 ▼	0.07	0.01 ▼	0.02
27	460	Crédit Agricole	-	-	-	-	31.09 ▼	45.14	52.3 ▲	-0.16	1.63 ▲	0
28	536	Vivendi	0.69	0.69	0.66 ▲	0.57	1.78 ▼	2.06	0.12 ▲	0.01	0.04 ▲	0
29	572	CIC Group	1.39 ▲		0.8 ▲		0.95 ▼	21.68	0 ▼	0.07	0	0
30	576	Veolia Environment	1.18	1.18	1.13 ▲	0.87	3.89 ▼	4.79	0.04 ▲	-0.02	0.01 ▲	0

Figure 8.5

8.6 French Companies - IFRS and GAAP Financial Ratio Observations

Current Ratio: As it evidenced in the company table above, the current ratio was largely unaffected by the implementation of IFRS with only slight variations between the two standards.

Quick Ratio: The quick was significantly affected due to the differences in reporting of inventory and current assets. The differences change the liquidity outlook in the majority of the French companies sampled. This makes the companies appear more able to meet their short term obligations thereby decreasing risk for investors.

Debt Equity Ratio: IFRS reporting results in a lower D/E ratio were fairly evenly split for this sample firms in half it showered a decrease the company's reliance on financing while some others were shown to have a higher reliance. This can help to convince investors of the investment worthiness of a company and is a very valid indicator to consider.

Return on Equity: The effect of IFRS on the French sample has a tendency towards slight increases in ROE which indicates to investors that management is efficiently implementing their capital and that the company does not have to seek infusion from other sources thus improving the company outlook in the eyes of investors.

Return on Assets: More than half of the French firms experienced no significant shift at all. The remainders were fairly evenly split. We might therefore confirm that the impact of IFRS implementation on profitability outlook therefore appears to rely heavily on your industry.

	Forbes Ranking	COMPANY NAME	CURRENT RATIO IFRS		CURRENT RATIO GAAP	QUICK RATIO IFRS		QUICK RATIO GAAP	DEBT EQUITY IFRS		DEBT EQUITY GAAP	RETURN ON EQUITY IFRS		RETURN ON EQUITY GAAP	RETURN ON ASSETS IFRS		RETURN ON ASSETS GAAP
1	6	HSBC Holdings	-		-	-		-	24.73	▲	14.39	0.35	▲	0.08	0.01		0.01
2	18	BP	1.43	▲	1.19	1.07	▲	0.82	1.52		1.52	0.1		0.1	0.04	▲	0.04
3	33	Vodafone	1.11	▲	0.83	1.08	▲	0.66	1.61	▲	0.77	0.26	▲	0.09	0.07	▲	0.05
4	65	Prudential	-		-	-		-	26.26	▼	28.06	0.23	▲	0.21	0.01		0.01
5	98	Standard Chartered	-		-	-		-	12.82	▼	13	0.17	▲	0.11	0.01		0.01
6	105	Tesco	0.64	▼	0.67	0.46	▲	0.43	1.85		1.85	0.22	▲	0.16	0.08	▲	0.06
7	112	GlaxoSmithKline	0.99		0.99	0.7	▲	0.68	5.98	▲	5.57	0.22	▼	0.79	0.03	▼	0.12
8	149	AstraZeneca	1.37		1.37	1.22	▲	1.14	7.75	▲	1.2	2.02	▲	0.27	0.14	▲	0.12
9	159	British American Tobacco	1.13		1.13	0.63		0.63	4.42	▲	2.57	1.28	▲	0.51	0.21	▲	0.14
10	163	BG Group	1.44			1.34			0.97			0.14			0.07		
11	179	National Grid	1.29	▲	0.9	1.25	▲	0.67	4.35	▲	4.12	0.37	▲	0.22	0.07	▲	0.04
12	188	SABMiller	0.69	▼	0.7	0.5	▲	0.47	1.18		1.18	0.16	▼	0.17	0.07	▼	0.08
13	208	Legal & General Group	-		-	-		-	62.64	▲	62.12	0.2	▲	0.15	0		0
14	221	BT Group	1.45	▲	0.49	1.44	▲	0.33	10.32	▼	16.97	2.38	▲	1.54	0.13	▲	0.09
15	224	Old Mutual	-		-	-		-	15.39	▼	17	0.75	▲	0.15	0.05	▲	0.01
16	242	Diageo	1.52	▲	1.52	0.69	▲	0.64	2.78	▲	2.72	0.57	▲	0.35	0.14	▲	0.09
17	245	Centrica	17.44	▲	0.95	17.44	▲	0.8	1.67	▼	2.67	0.46	▲	0.21	0.12	▲	0.06
18	287	Standard Life	-		-	-		-	38.9	▲	37.27	0.26	▲	0.16	0.01	▲	0
19	291	Rolls-Royce Holding	1.33		1.33	0.95	▲	0.93	1.97	▲	1.92	0.23	▼	0.37	0.08	▼	0.13
20	296	Imperial Tobacco Group	0.57	▼	0.78	0.32	▼	0.42	3.57	▲	3.55	0.52	▲	0.11	0.11	▲	0.02
21	319	Reckitt Benckiser Group	0.47		0.47	0.36	▲	0.35	1.55	▲	1.54	0.43	▲	0.31	0.17	▲	0.12
	325	BAE Systems	0.78		0.78	0.71	▲	0.68	4.97	▲	4.6	0.42	▲	0.29	0.07	▲	0.05
23	355	WPP	0.94		0.94	0.92	▲	0.73	2.91	▲	2.6	0.18	▲	0.12	0.05	▲	0.03
24	390	Lloyds Banking Group	-		-	-		-	20	▲	19.9	-0.03		-0.03	0		0
25	400	Barclays	-		-	-		-	0.96	▼	26.58	0	▲	-0.02	0	▲	0
26	420	Royal Bank of Scotland	-		-	-		-	18.23	▲	18.18	0.05	▲	-0.09	0		0
27	435	Rio Tinto	1.39	▲	1.39	0.95	▲	0.92	1.27	▲	1.2	-0.06		-0.06	-0.03		-0.03
28	471	Compass Group	0.9		0.9	0.83	▲	0.75	1.85	▲	1.76	0.36	▲	0.19	0.13	▲	0.07
29	473	Aon	1.16			1.16			2.92			0.16			0.04		
30	493	Associated British Foods	1.26		1.26	0.68	▲	0.63	0.69	▲	0.66	0.18	▲	0.1	0.11	▲	0.06

British Companies – IFRS and GAAP Ratio Change Comparison

Figure 8.7

8.8 British Companies - IFRS and GAAP Financial Ratio Observations

Current Ratio: Again, the current ratio was largely unaffected by the implementation of IFRS with only slight variations between the two standards in a handful of companies.

Quick Ratio: The quick ratio which is largely affected due to the differences in reporting of inventory and current assets saw almost anonymous increases in the quick ratio with the exception of those companies for which data was unavailable for DataStream. The differences change the liquidity outlook in the majority of the British companies sampled making them appear more able to meet their short term obligations thereby decreasing risk for investors.

Debt Equity Ratio: The D/E ratio also saw a majority of companies increase when IFRS ratios were calculated. This makes the firms in the British market appear more reliant on outside financing and thus they are likely saddled with liability to outside entities. This can help to convince investors of the investment worthiness of a company.

Return on Equity: The effect of IFRS on the British companies had a tendency towards increases in ROE indicating that management is efficiently implementing their capital and that the company does not rely on outside sources of funding, thus improving the company outlook in the eyes of investors.

Return on Assets: Approximately one half of the British sample saw increases in the profitability outlook demonstrated by ROA. Another quarter of the same experienced no significant change or had insufficient data to determine. Therefore we might determine that IFRS had a somewhat notable benefit for ROA for British companies.

Italian Companies – IFRS and GAAP Ratio Change Comparison

	Forbes	COMPANY	CURRENT RATIO		QUICK RATIO		DEBT EQUITY		RETURN ON EQUITY		RETURN ON ASSETS	
	Ranking	NAME	IFRS	GAAP	IFRS	GAAP	IFRS	GAAP	IFRS	GAAP	IFRS	GAAP
1	30	ENI	1.73 ▲	1.43	1.27 ▲	1.15	0.21 ▼	1.22	0.27 ▲	0.13	0.11 ▲	0.06
2	145	ENEL SPA	1.86 ▲	1.08	1.4 ▲	0.98	0 ▼	3.05	0.13 ▲	0.02	0.06 ▲	0.01
3	154	UniCredit Group	1.15		1.15			13.44	0.07 ▲	0.01	0.01 ▲	0
4	412	EXOR	1.19 ▼	1.55	0.55 ▼	1.15	0.68 ▼	14.15	0.27 ▲	0.06	0.01 ▲	0
5	436	Generali Group					0 ▼	24.01	0 ▼	0.01	0	0
6	459	Intesa Sanpaolo	1.21		1.21			12.36	0.03		0.01 ▲	0
7	586	Telecom Italia	1.36 ▲	0.96	1.21 ▲	0.91	0.01 ▼	2.74	1.09 ▲	-0.08	0.17 ▲	-0.02
8	729	Luxottica Group	1.87 ▲	1.34	1.33 ▲	0.88	0.4 ▼	1.07	0.25 ▲	0.14	0.12 ▲	0.07
9	756	Atlantia	1.22 ▼	1.32	1.01 ▼	1.26	0.02 ▼	6.06	0.44 ▲	0.21	0.06 ▲	0.03
10	826	Unipol Gruppo	1.91		1.83		0 ▼	13.22	0.44 ▲	0.05	0.21 ▲	0
11	1024	Banca MPS	1.03		1.03			32.12	-0.16 ▲	-0.49	-0.01	-0.01
12				0.96		0.46		7.51		-0.24		-0.03
13	1068	Finmeccanica	1.49		1.02		0 ▼	25.92	-0.29 ▼	0.26	-0.06 ▼	0.01
14	1085	Mediolanum	0.98 ▼	1.67	0.98 ▼	1.66		4.42		0.17	0.03	0.03
15	1105	Terna	1.23		0.86		0 ▼	11.86	0.5 ▲	-0.11	0.09 ▲	-0.01
16	1166	Banco Popolare	-	-	-	-	-	-	-	-	-	-
17	1172	Prada	2.79		1.73		0.5 ▼	9.72	0.38 ▲	0.02	0.3 ▲	0
18	1183	UBI Banca	1.08		1.08		-	-	0.37		0.03	
19	1280	Pirelli & C	1.44 ▲	1.3	0.85 ▼	1.16	0.46 ▼	2.8	0.33 ▲	0.09	0.1 ▲	0.02
20	1399	A2A	1.46		1.06		0.14 ▼	13.79	0.38 ▲	0	0.09 ▲	0
21	1556	Banca Popolare dell'Emilia	1		1			11.86	0.03 ▲	-0.11	0 ▲	-0.01
	1635	Banca Popolare di Milano	1.09		1.09			12.23	0.08 ▲	-0.02	0.01 ▲	0
23	1650	Banco Carige	68.11		68.11			12.74	-0.12 ▼	0.05	-0.27 ▼	0
24	1743	Cattolica Assicurazioni	1.06		1.06			16.16	0.02	0.02	0	0
25	1754	Banca Popolare di Sondrio	1.04		1.04			14.4	0.13 ▲	0.06	0	0
26	1775	Credito Emiliano	1.07		1.07			13.82	0.12 ▲	-0.16	0.01 ▲	-0.01
27	1782	Credito Valtellinese	1.08 ▼	1.22	1.08 ▲	0.71		2.22	-0.19 ▼	-0.08	-0.01 ▲	-0.02
28	1794	Saras	1.44 ▲	1.24	0.63 ▼	0.93	0.51 ▼	4.26	-0.1 ▼	0.15	-0.03 ▼	0.03
29	1881	Prysmian	3.24 ▲	1.28	1.34 ▲	0.99	0.32 ▼	3.03	0.21 ▲	-0.15	0.04 ▲	-0.03
30	1925	Italmobiliare	1.85 ▼	2.11	1.24 ▼	1.64	0.3 ▼	0.67	-0.11 ▼	0.13	-0.02 ▼	0.08

Figure 8.9

8.9 Italian Companies - IFRS and GAAP Financial Ratio Observations

Current Ratio: An overwhelming percentage of Italian corporate leader are comprised of financial institutions and insurers. As a result the current assets and liabilities as well as the inventory data is largely unavailable and the data cannot be compared in a realistic manner.

Quick Ratio: Again due to the makeup of corporate institutions in the Italian market, measurable and beneficial data cannot easily be rendered in regards to the effect of IFRS on Quick Ratios.. This makes the companies appear more able to meet their short term obligations thereby decreasing risk for investors.

Debt Equity Ratio: More than half of the Itallian sample saw D/E ratios decrease under IFRS, indicating that the firms rely less heavily on outside financing and therefore have significant leverage. This can help to convince investors of the investment worthiness of a company.

Return on Equity: The effect of IFRS on the Italian sample has a tendency towards increases in ROE which indicate efficiently in implementing investor capital and that the company need not seek other sources of finance. This improves the company outlook in the eyes of investors.

Return on Assets: ROA saw significant increases implementing the companies appear to have a greater profitability outlook under IFRS than standard GAAP.

8.10 Summary of Impact of IFRS on Financial Ratios

This can be summarized quite quickly. Without any question without, IFRS implementation has an effect it positive or negative on the financial ratio output provided to investors. This data directly influences investor opinions and decisions and is therefore very much of note. The study is not comprehensive and detailed in testing for additional factors however, for the purpose of demonstrating that IFRS does in fact impact financial ratios it proved more than sufficient to demonstrate the correlation between the two. This further supports the findings and opinions of prior researchers such as Blanchette et al. (2011), Hansen (2013), Lynch (2007), Lantto and Sahlström (2009) and numerous other researchers, highlighted in Chapter three, who support the connection.

8.11 Conclusion

A study set off to answer several research questions to do so for hypotheses were determined that needed to be tested against valid research data. The first of these was 'H1: IFRS can alter financial ratios significantly'. As was clearly demonstrated here in chapter 8, the difference in reporting between standardized GAAP and IFRS reporting standards clearly results in varied financial ratio data. In some cases there are remarkably large shifts and at other times the shifts seem almost mundane, but the fact that the shifts do commonly occur is without question.

Our second objective was to prove 'H2: IFRS implementation applied to the largest companies, by revenue, can affect GDP significantly'. Chapter 7 unquestionably verified H1 to demonstrate that IFRS does in fact affect financial reporting and ratios. Financial ratios and GDP being two of the primary sources of data input to investors, establishing H1 help to ensure we could establish H2 as well. When looking at chapter 7 and the effects of IFRS implementation on FDI and the resulting tax revenue increases that often accompany it as well as the measurable GDP growth demonstrated we can unquestionably ascertain that IFRS implementation does in fact impact GDP and the factors used to generate its growth. Remembering that the majority of substantial tax revenue is generated by the top companies in any given economy, having established the effects of IFRS on FDI and reporting for companies and the impact this has on tax revenues at the government level does a significant job of furthering this hypothesis.

' H3: IFRS implemented across a global economy for statutory filing can shift economic wealth' was also demonstrated in chapter 6. The direct inflows and outflows of FDI and large sums of capital associated with those shifts clearly demonstrate the movement of economic wealth across borders and its ability to boost up economic factors, boosting tax revenues, government expenditures and thereby fueling growth for companies and the economy as a whole.

The final test was related to 'H4: Successful IFRS implementation needs cooperation from investors, companies & governments'. While this is perhaps the most abstract and difficult to grasp for some reviewing

the research, the supporting structure for the development of the multi-agent model developed by the author are sound. They are firmly supported by Classic Agency Theory, Public interest Theory, Interest Group Theory as well as the methods implemented by Habermas, i.e. the Habermas' Approach. The examples provided and demonstrated within the research show the multi-agent model's ability to utilize all of these in conjunction and demonstrate the existing relationships between government entities, companies and investors. Something each of the individual models only manages in part by themselves to establish what the multi-agent model manages in whole.

8.16 Limitations of this Study and IFRS adoption

There are a number of limitations to this study. First and foremost it does not take the standard approach of regression analysis performed by most researchers. Additionally though the selection of companies involved in numbered nearly 300 and only the top economies were utilized, there were still large research information gaps due to the fact at the time of this research not all countries involved in the study had adopted IFRS or converged to IFRS. Towards the completion of the study nearly all countries except for the United States and Japan have now adopted or converged to IFRS. Additional financial data which may be more pertinent in trying to more clearly demonstrate the proposed shifts and financial ratios and FDI might better be demonstrated with this added data. As in all studies that utilize samples, a larger or wider sample size would likely be beneficial in providing more useful data to the study. Additionally eliminating institutions such as those related to financial and insurance, which are often large outliers and extremely difficult to include, might create more relevant and focused data. Another additional idea might be to focus on the effects of specific markets within each of the 10 economies as opposed to the overall market and each economy and effort to identify the impact within that market on the country's economy. This would also allow for more comparable data.

When asked what the most limiting factors to IFRS adoption are, uncertainty avoidance is perhaps highest on the list. Everyone recognizes that the trend towards IFRS adoption is the future but the long term affects and macroeconomic impacts are not well enough established to permit a feeling of familiarity or certainty from which the regulators can safely proceed.

Another significant limitation is the fact that IFRS are not being adopted wholeheartedly. They're being used for reporting purposes but they do not represent the whole truth of a company's financial position as the companies must still utilize local GAAP for statutory filing. This hinders the IFRS effort as the rules are perhaps never fully understood or utilized in the spirit that they were intended because they hold no true authority in the eyes of local governments.

Additionally we have the problem of label adopters. Many of the top economies do not regulate IFRS implementation sufficiently enough for them to be of value. As other less developed economies adopt and implement IFRS they will have that example to look to. Adoption equates to an at least a temporary influx of financial capital until investors come to the determination that IFRS afford them no protection in such environments.

In combination with the issue of label adopters there is still considerable levels of both government and corporate corruption which erodes the value and effectiveness of IFRS in those economies. Both of these ideas speak directly to the fact that for IFRS implementation to be successful, we will require the investors who desire it, the corporate managers who adopt it working in the interest of themselves and investors and the government who implements and regulates to insure the investors are protected and the economy prospers. Corruption at any level in any of the relationships found in the multi-agent model leads to a destabilization and ultimately a collapse in the relationship. A healthy and well maintained multi-agent relationship is

essential to the proper implementation and utilization of IFRS not to mention the health of an economy as a whole.

8.16 Future Research Opportunities

Specific research opportunities that may be undertaken in the future include regression analysis of this data to provide analytical proof of the validity of data shifts. Additionally this would allow us to eliminate data with no statistical relevance and focus more specifically on relevant areas. Another recommended approach would be to focus more specifically on the effects of IFRS adoption on revenue reporting in the sample selection or a similar sample more targeted to market.

As the theory of multiagency is the intellectual property and development of the author, there are substantial opportunities to further verify its relevance by applying it to other areas of management not solely limiting it to transactions between government, companies and investors but rather extending its usage to any three parties involved in transactions that may involve substantial information asymmetry and a level of uncertainty avoidance.

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Appendix 1 World Bank – DataBank - Key Definitions

Generated via the World Bank – DataBank
(accessible at http://databank.worldbank.org/data/reports.aspx?source=2&country=DEU&series=&period=#)

Indicator Name	Tax revenue (current LCU)
Long definition	Tax revenue refers to compulsory transfers to the central government for public purposes. Certain compulsory transfers such as fines, penalties, and most social security contributions are excluded. Refunds and corrections of erroneously collected tax revenue are treated as negative revenue.
Source	International Monetary Fund, Government Finance Statistics Yearbook and data files.
Topic	Public Sector: Government finance: Revenue
Periodicity	Annual
Statistical concept and methodology	The IMF's Government Finance Statistics Manual 2001, harmonized with the 1993 SNA, recommends an accrual accounting method, focusing on all economic events affecting assets, liabilities, revenues, and expenses, not just those represented by cash transactions. It accounts for all changes in stocks, so stock data at the end of an accounting period equal stock data at the beginning of the period plus flows over the period. The 1986 manual considered only debt stocks. Government finance statistics are reported in local currency. Many countries report government finance data by fiscal year; see country metadata for information on fiscal year end by country.
Limitations and exceptions	For most countries central government finance data have been consolidated into one account, but for others only budgetary central government accounts are available. Countries reporting budgetary data are noted in the country metadata. Because budgetary accounts may not include all central government units (such as social security funds), they usually provide an incomplete picture. In federal states the central government accounts provide an incomplete view of total public finance. Data on government revenue and expense are collected by the IMF through questionnaires to member countries and by the Organisation for Economic Co-operation and Development (OECD). Despite IMF efforts to standardize data collection, statistics are often incomplete, untimely, and not comparable across countries.
License Type	Open
Indicator Name	Tax revenue (% of GDP)
Long definition	Tax revenue refers to compulsory transfers to the central government for public purposes. Certain compulsory transfers such as fines, penalties, and most social security contributions are excluded. Refunds and corrections of erroneously collected tax revenue are treated as negative revenue.
Source	International Monetary Fund, Government Finance Statistics Yearbook and data files, and World Bank and OECD GDP estimates.
Topic	Public Sector: Government finance: Revenue

Periodicity	Annual
Aggregation method	Weighted average
Statistical concept and methodology	The IMF's Government Finance Statistics Manual 2001, harmonized with the 1993 SNA, recommends an accrual accounting method, focusing on all economic events affecting assets, liabilities, revenues, and expenses, not just those represented by cash transactions. It accounts for all changes in stocks, so stock data at the end of an accounting period equal stock data at the beginning of the period plus flows over the period. The 1986 manual considered only debt stocks. Government finance statistics are reported in local currency. Many countries report government finance data by fiscal year; see country metadata for information on fiscal year end by country.
Limitations and exceptions	For most countries central government finance data have been consolidated into one account, but for others only budgetary central government accounts are available. Countries reporting budgetary data are noted in the country metadata. Because budgetary accounts may not include all central government units (such as social security funds), they usually provide an incomplete picture. In federal states the central government accounts provide an incomplete view of total public finance. Data on government revenue and expense are collected by the IMF through questionnaires to member countries and by the Organisation for Economic Co-operation and Development (OECD). Despite IMF efforts to standardize data collection, statistics are often incomplete, untimely, and not comparable across countries.
License Type	Open
Indicator Name	Taxes on goods and services (% of revenue)
Long definition	Taxes on goods and services include general sales and turnover or value added taxes, selective excises on goods, selective taxes on services, taxes on the use of goods or property, taxes on extraction and production of minerals, and profits of fiscal monopolies.
Source	International Monetary Fund, Government Finance Statistics Yearbook and data files.
Topic	Public Sector: Government finance: Revenue
Periodicity	Annual
Aggregation method	Median
Statistical concept and methodology	The IMF's Government Finance Statistics Manual 2001, harmonized with the 1993 SNA, recommends an accrual accounting method, focusing on all economic events affecting assets, liabilities, revenues, and expenses, not just those represented by cash transactions. It accounts for all changes in stocks, so stock data at the end of an accounting period equal stock data at the beginning of the period plus flows over the period. The 1986 manual considered only debt stocks. Government finance statistics are reported in local currency. Many countries report government finance data by fiscal year; see country metadata for information on fiscal year end by country.
Limitations and exceptions	For most countries central government finance data have been consolidated into one account, but for others only budgetary central government accounts are available. Countries reporting budgetary data are noted in the country metadata. Because budgetary

	accounts may not include all central government units (such as social security funds), they usually provide an incomplete picture. In federal states the central government accounts provide an incomplete view of total public finance. Data on government revenue and expense are collected by the IMF through questionnaires to member countries and by the Organisation for Economic Co-operation and Development (OECD). Despite IMF efforts to standardize data collection, statistics are often incomplete, untimely, and not comparable across countries.
License Type	Open
Indicator Name	Taxes on goods and services (current LCU)
Long definition	Taxes on goods and services include general sales and turnover or value added taxes, selective excises on goods, selective taxes on services, taxes on the use of goods or property, taxes on extraction and production of minerals, and profits of fiscal monopolies.
Source	International Monetary Fund, Government Finance Statistics Yearbook and data files.
Topic	Public Sector: Government finance: Revenue
Periodicity	Annual
Statistical concept and methodology	The IMF's Government Finance Statistics Manual 2001, harmonized with the 1993 SNA, recommends an accrual accounting method, focusing on all economic events affecting assets, liabilities, revenues, and expenses, not just those represented by cash transactions. It accounts for all changes in stocks, so stock data at the end of an accounting period equal stock data at the beginning of the period plus flows over the period. The 1986 manual considered only debt stocks. Government finance statistics are reported in local currency. Many countries report government finance data by fiscal year; see country metadata for information on fiscal year end by country.
Limitations and exceptions	For most countries central government finance data have been consolidated into one account, but for others only budgetary central government accounts are available. Countries reporting budgetary data are noted in the country metadata. Because budgetary accounts may not include all central government units (such as social security funds), they usually provide an incomplete picture. In federal states the central government accounts provide an incomplete view of total public finance. Data on government revenue and expense are collected by the IMF through questionnaires to member countries and by the Organisation for Economic Co-operation and Development (OECD). Despite IMF efforts to standardize data collection, statistics are often incomplete, untimely, and not comparable across countries.
License Type	Open
Indicator Name	Taxes on income, profits and capital gains (% of total taxes)
Long definition	Taxes on income, profits, and capital gains are levied on the actual or presumptive net income of individuals, on the profits of corporations and enterprises, and on capital gains, whether realized or not, on land, securities, and other assets. Intragovernmental payments are eliminated in consolidation.
Source	International Monetary Fund, Government Finance Statistics Yearbook and data files.

Topic	Public Sector: Government finance: Revenue
Periodicity	Annual
Statistical concept and methodology	The IMF's Government Finance Statistics Manual 2001, harmonized with the 1993 SNA, recommends an accrual accounting method, focusing on all economic events affecting assets, liabilities, revenues, and expenses, not just those represented by cash transactions. It accounts for all changes in stocks, so stock data at the end of an accounting period equal stock data at the beginning of the period plus flows over the period. The 1986 manual considered only debt stocks. Government finance statistics are reported in local currency. Many countries report government finance data by fiscal year; see country metadata for information on fiscal year end by country.
Limitations and exceptions	For most countries central government finance data have been consolidated into one account, but for others only budgetary central government accounts are available. Countries reporting budgetary data are noted in the country metadata. Because budgetary accounts may not include all central government units (such as social security funds), they usually provide an incomplete picture. In federal states the central government accounts provide an incomplete view of total public finance. Data on government revenue and expense are collected by the IMF through questionnaires to member countries and by the Organisation for Economic Co-operation and Development (OECD). Despite IMF efforts to standardize data collection, statistics are often incomplete, untimely, and not comparable across countries.
License Type	Open
Indicator Name	Taxes on income, profits and capital gains (% of revenue)
Long definition	Taxes on income, profits, and capital gains are levied on the actual or presumptive net income of individuals, on the profits of corporations and enterprises, and on capital gains, whether realized or not, on land, securities, and other assets. Intragovernmental payments are eliminated in consolidation.
Source	International Monetary Fund, Government Finance Statistics Yearbook and data files.
Topic	Public Sector: Government finance: Revenue
Periodicity	Annual
Aggregation method	Median
Statistical concept and methodology	The IMF's Government Finance Statistics Manual 2001, harmonized with the 1993 SNA, recommends an accrual accounting method, focusing on all economic events affecting assets, liabilities, revenues, and expenses, not just those represented by cash transactions. It accounts for all changes in stocks, so stock data at the end of an accounting period equal stock data at the beginning of the period plus flows over the period. The 1986 manual considered only debt stocks. Government finance statistics are reported in local currency. Many countries report government finance data by fiscal year; see country metadata for information on fiscal year end by country.
Limitations and exceptions	For most countries central government finance data have been consolidated into one account, but for others only budgetary central government accounts are available.

	Countries reporting budgetary data are noted in the country metadata. Because budgetary accounts may not include all central government units (such as social security funds), they usually provide an incomplete picture. In federal states the central government accounts provide an incomplete view of total public finance. Data on government revenue and expense are collected by the IMF through questionnaires to member countries and by the Organisation for Economic Co-operation and Development (OECD). Despite IMF efforts to standardize data collection, statistics are often incomplete, untimely, and not comparable across countries.
License Type	Open
Indicator Name	Foreign direct investment, net inflows (% of GDP)
Long definition	Foreign direct investment are the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. This series shows net inflows (new investment inflows less disinvestment) in the reporting economy from foreign investors, and is divided by GDP.
Source	International Monetary Fund, International Financial Statistics and Balance of Payments databases, World Bank, International Debt Statistics, and World Bank and OECD GDP estimates.
Topic	Economic Policy & Debt: Balance of payments: Capital & financial account
Periodicity	Annual
Aggregation method	Weighted average
Statistical concept and methodology	Data on equity flows are based on balance of payments data reported by the International Monetary Fund (IMF). Foreign direct investment (FDI) data are supplemented by the World Bank staff estimates using data from the United Nations Conference on Trade and Development (UNCTAD) and official national sources. The internationally accepted definition of FDI (from the sixth edition of the IMF's Balance of Payments Manual [2009]), includes the following components: equity investment, including investment associated with equity that gives rise to control or influence; investment in indirectly influenced or controlled enterprises; investment in fellow enterprises; debt (except selected debt); and reverse investment. The Framework for Direct Investment Relationships provides criteria for determining whether cross-border ownership results in a direct investment relationship, based on control and influence. Distinguished from other kinds of international investment, FDI is made to establish a lasting interest in or effective management control over an enterprise in another country. A lasting interest in an investment enterprise typically involves establishing warehouses, manufacturing facilities, and other permanent or long-term organizations abroad. Direct investments may take the form of greenfield investment, where the investor starts a new venture in a foreign country by constructing new operational facilities; joint venture, where the investor enters into a partnership agreement with a company abroad to establish a new enterprise; or merger and acquisition, where the investor acquires an existing enterprise abroad. The IMF suggests that investments should account for at least 10 percent of voting stock to be counted as FDI. In practice many countries set a higher threshold. Many countries fail to report reinvested earnings, and the definition of long-term loans differs among countries. BoP refers to Balance of

	Payments.
Development relevance	Private financial flows - equity and debt - account for the bulk of development finance. Equity flows comprise foreign direct investment (FDI) and portfolio equity. Debt flows are financing raised through bond issuance, bank lending, and supplier credits. FDI data do not give a complete picture of international investment in an economy. Balance of payments data on FDI do not include capital raised locally, an important source of investment financing in some developing countries. In addition, FDI data omit nonequity cross-border transactions such as intra-unit flows of goods and services.
Limitations and exceptions	The volume of global private financial flows reported by the World Bank generally differs from that reported by other sources because of differences in sources, classification of economies, and method used to adjust and disaggregate reported information. In addition, particularly for debt financing, differences may also reflect how some installments of the transactions and certain offshore issuances are treated. Data on equity flows are shown for all countries for which data are available.
General comments	Note: Data starting from 2005 are based on the sixth edition of the IMF's Balance of Payments Manual (BPM6).
License Type	Open
Indicator Name	Foreign direct investment, net (BoP, current US$)
Long definition	Foreign direct investment are the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. This series shows total net FDI. In BPM6, financial account balances are calculated as the change in assets minus the change in liabilities. Net FDI outflows are assets and net FDI inflows are liabilities. Data are in current U.S. dollars.
Source	International Monetary Fund, Balance of Payments Statistics Yearbook and data files.
Topic	Economic Policy & Debt: Balance of payments: Capital & financial account
Periodicity	Annual
General	Note: Data are based on the sixth edition of the IMF's Balance of Payments Manual

comments	(BPM6) and are only available from 2005 onwards. In BPM6, the headings of the financial account have been changed from credits and debits to net acquisition of financial assets and net incurrence of liabilities; i.e., all changes due to credit and debit entries are recorded on a net basis separately for financial assets and liabilities. Financial account balances are calculated as the change in assets minus the change in liabilities; signs are reversed from previous editions.
License Type	Open
Indicator Name	Foreign direct investment, net inflows (BoP, current US$)
Long definition	Foreign direct investment refers to direct investment equity flows in the reporting economy. It is the sum of equity capital, reinvestment of earnings, and other capital. Direct investment is a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy. Ownership of 10 percent or more of the ordinary shares of voting stock is the criterion for determining the existence of a direct investment relationship. Data are in current U.S. dollars.
Source	International Monetary Fund, Balance of Payments database, supplemented by data from the United Nations Conference on Trade and Development and official national sources.
Topic	Economic Policy & Debt: Balance of payments: Capital & financial account
Periodicity	Annual
Aggregation method	Sum
Statistical concept and methodology	Data on equity flows are based on balance of payments data reported by the International Monetary Fund (IMF). Foreign direct investment (FDI) data are supplemented by the World Bank staff estimates using data from the United Nations Conference on Trade and Development (UNCTAD) and official national sources. The internationally accepted definition of FDI (from the sixth edition of the IMF's Balance of Payments Manual [2009]), includes the following components: equity investment, including investment associated with equity that gives rise to control or influence; investment in indirectly influenced or controlled enterprises; investment in fellow enterprises; debt (except selected debt); and reverse investment. The Framework for Direct Investment Relationships provides criteria for determining whether cross-border ownership results in a direct investment relationship, based on control and influence. Distinguished from other kinds of international investment, FDI is made to establish a lasting interest in or effective management control over an enterprise in another country. A lasting interest in an investment enterprise typically involves establishing warehouses, manufacturing facilities, and other permanent or long-term organizations abroad. Direct investments may take the form of greenfield investment, where the investor starts a new venture in a foreign country by constructing new operational facilities; joint venture, where the investor enters into a partnership agreement with a company abroad to establish a new enterprise; or merger and acquisition, where the investor acquires an existing enterprise abroad. The IMF suggests that investments should account for at least 10 percent of voting stock to be counted as FDI. In practice many countries set a higher threshold. Many countries fail to report reinvested earnings, and the definition of long-term loans differs among countries. BoP refers to Balance of Payments.
Development relevance	Private financial flows - equity and debt - account for the bulk of development finance. Equity flows comprise foreign direct investment (FDI) and portfolio equity. Debt flows

	are financing raised through bond issuance, bank lending, and supplier credits. FDI data do not give a complete picture of international investment in an economy. Balance of payments data on FDI do not include capital raised locally, an important source of investment financing in some developing countries. In addition, FDI data omit nonequity cross-border transactions such as intra-unit flows of goods and services. The volume of global private financial flows reported by the World Bank generally differs from that reported by other sources because of differences in sources, classification of economies, and method used to adjust and disaggregate reported information. In addition, particularly for debt financing, differences may also reflect how some installments of the transactions and certain offshore issuances are treated.
Limitations and exceptions	Data on equity flows are shown for all countries for which data are available.
General comments	Note: Data starting from 2005 are based on the sixth edition of the IMF's Balance of Payments Manual (BPM6).
License Type	Open

Indicator Name	Foreign direct investment, net outflows (% of GDP)
Long definition	Foreign direct investment refers to direct investment equity flows in an economy. It is the sum of equity capital, reinvestment of earnings, and other capital. Direct investment is a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy. Ownership of 10 percent or more of the ordinary shares of voting stock is the criterion for determining the existence of a direct investment relationship. This series shows net outflows of investment from the reporting economy to the rest of the world, and is divided by GDP.
Source	International Monetary Fund, Balance of Payments database, supplemented by data from the United Nations Conference on Trade and Development and official national sources.
Topic	Economic Policy & Debt: Balance of payments: Capital & financial account
Periodicity	Annual
Aggregation method	Weighted average

	Data on equity flows are based on balance of payments data reported by the International Monetary Fund (IMF). Foreign direct investment (FDI) data are supplemented by the World Bank staff estimates using data from the United Nations Conference on Trade and Development (UNCTAD) and official national sources. The internationally accepted definition of FDI (from the sixth edition of the IMF's Balance of Payments Manual [2009]), includes the following components: equity investment, including investment associated with equity that gives rise to control or influence; investment in indirectly influenced or controlled enterprises; investment in fellow enterprises; debt (except selected debt); and reverse investment. The Framework for Direct Investment Relationships provides criteria for determining whether cross-border ownership results in a direct investment relationship, based on control and influence. Distinguished from other kinds of international investment, FDI is made to establish a lasting interest in or effective management control over an enterprise in another country. A lasting interest in an investment enterprise typically involves establishing warehouses, manufacturing facilities, and other permanent or long-term organizations abroad. Direct investments may take the form of greenfield investment, where the investor starts a new venture in a foreign country by constructing new operational facilities; joint venture, where the investor enters into a partnership agreement with a company abroad to establish a new enterprise; or merger and acquisition, where the investor acquires an existing enterprise abroad. The IMF suggests that investments should account for at least 10 percent of voting stock to be counted as FDI. In practice
Statistical concept and methodology	many countries set a higher threshold. Many countries fail to report reinvested earnings, and the definition of long-term loans differs among countries. BoP refers to Balance of Payments.
Development relevance	Private financial flows - equity and debt - account for the bulk of development finance. Equity flows comprise foreign direct investment (FDI) and portfolio equity. Debt flows are financing raised through bond issuance, bank lending, and supplier credits.
Limitations and exceptions	FDI data do not give a complete picture of international investment in an economy. Balance of payments data on FDI do not include capital raised locally, an important source of investment financing in some developing countries. In addition, FDI data omit nonequity cross-border transactions such as intra-unit flows of goods and services.The volume of global private financial flows reported by the World Bank generally differs from that reported by other sources because of differences in sources, classification of economies, and method used to adjust and disaggregate reported information. In addition, particularly for debt financing, differences may also reflect how some installments of the transactions and certain offshore issuances are treated.Data on equity flows are shown for all countries for which data are available.
General comments	Note: Data starting from 2005 are based on the sixth edition of the IMF's Balance of Payments Manual (BPM6).
License Type	Open
Indicator Name	Foreign direct investment, net outflows (BoP, current US$)
Long definition	Foreign direct investment refers to direct investment equity flows in an economy. It is the sum of equity capital, reinvestment of earnings, and other capital. Direct investment is a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy. Ownership of 10 percent or more of the ordinary shares of

	voting stock is the criterion for determining the existence of a direct investment relationship. This series shows net outflows of investment from the reporting economy to the rest of the world. Data are in current U.S. dollars.
Source	International Monetary Fund, Balance of Payments database, supplemented by data from the United Nations Conference on Trade and Development and official national sources.
Topic	Economic Policy & Debt: Balance of payments: Capital & financial account
Periodicity	Annual
Aggregation method	Weighted average
Statistical concept and methodology	Data on equity flows are based on balance of payments data reported by the International Monetary Fund (IMF). Foreign direct investment (FDI) data are supplemented by the World Bank staff estimates using data from the United Nations Conference on Trade and Development (UNCTAD) and official national sources. The internationally accepted definition of FDI (from the sixth edition of the IMF's Balance of Payments Manual [2009]), includes the following components: equity investment, including investment associated with equity that gives rise to control or influence; investment in indirectly influenced or controlled enterprises; investment in fellow enterprises; debt (except selected debt); and reverse investment. The Framework for Direct Investment Relationships provides criteria for determining whether cross-border ownership results in a direct investment relationship, based on control and influence. Distinguished from other kinds of international investment, FDI is made to establish a lasting interest in or effective management control over an enterprise in another country. A lasting interest in an investment enterprise typically involves establishing warehouses, manufacturing facilities, and other permanent or long-term organizations abroad. Direct investments may take the form of greenfield investment, where the investor starts a new venture in a foreign country by constructing new operational facilities; joint venture, where the investor enters into a partnership agreement with a company abroad to establish a new enterprise; or merger and acquisition, where the investor acquires an existing enterprise abroad. The IMF suggests that investments should account for at least 10 percent of voting stock to be counted as FDI. In practice many countries set a higher threshold. Many countries fail to report reinvested earnings, and the definition of long-term loans differs among countries. BoP refers to Balance of Payments.
Development relevance	Private financial flows - equity and debt - account for the bulk of development finance. Equity flows comprise foreign direct investment (FDI) and portfolio equity. Debt flows are financing raised through bond issuance, bank lending, and supplier credits. FDI data do not give a complete picture of international investment in an economy. Balance of payments data on FDI do not include capital raised locally, an important source of investment financing in some developing countries. In addition, FDI data omit nonequity cross-border transactions such as intra-unit flows of goods and services. The volume of global private financial flows reported by the World Bank generally differs from that reported by other sources because of differences in sources, classification of economies, and method used to adjust and disaggregate reported information. In addition, particularly for debt financing, differences may also reflect how some installments of the transactions and certain offshore issuances are treated.
Limitations and exceptions	Data on equity flows are shown for all countries for which data are available.
General	Note: Data starting from 2005 are based on the sixth edition of the IMF's Balance of

comments	Payments Manual (BPM6).
License Type	Open
Indicator Name	Foreign direct investment, net outflows (% of GDP)
Long definition	Foreign direct investment refers to direct investment equity flows in an economy. It is the sum of equity capital, reinvestment of earnings, and other capital. Direct investment is a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy. Ownership of 10 percent or more of the ordinary shares of voting stock is the criterion for determining the existence of a direct investment relationship. This series shows net outflows of investment from the reporting economy to the rest of the world, and is divided by GDP.
Source	International Monetary Fund, Balance of Payments database, supplemented by data from the United Nations Conference on Trade and Development and official national sources.
Topic	Economic Policy & Debt: Balance of payments: Capital & financial account
Periodicity	Annual
Aggregation method	Weighted average
Statistical concept and methodology	Data on equity flows are based on balance of payments data reported by the International Monetary Fund (IMF). Foreign direct investment (FDI) data are supplemented by the World Bank staff estimates using data from the United Nations Conference on Trade and Development (UNCTAD) and official national sources.The internationally accepted definition of FDI (from the sixth edition of the IMF's Balance of Payments Manual [2009]), includes the following components: equity investment, including investment associated with equity that gives rise to control or influence; investment in indirectly influenced or controlled enterprises; investment in fellow enterprises; debt (except selected debt); and reverse investment. The Framework for Direct Investment Relationships provides criteria for determining whether cross-border ownership results in a direct investment relationship, based on control and influence. Distinguished from other kinds of international investment, FDI is made to establish a lasting interest in or effective management control over an enterprise in another country. A lasting interest in an investment enterprise typically involves establishing warehouses, manufacturing facilities, and other permanent or long-term organizations abroad. Direct investments may take the form of greenfield investment, where the investor starts a new venture in a foreign country by constructing new operational facilities; joint venture, where the investor enters into a partnership agreement with a company abroad to establish a new enterprise; or merger and acquisition, where the investor acquires an existing enterprise abroad. The IMF suggests that investments should account for at least 10 percent of voting stock to be counted as FDI. In practice many countries set a higher threshold. Many countries fail to report reinvested earnings, and the definition of long-term loans differs among countries. BoP refers to Balance of Payments.
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	FDI data do not give a complete picture of international investment in an economy. Balance of payments data on FDI do not include capital raised locally, an important source of investment financing in some developing countries. In addition, FDI data omit nonequity cross-border transactions such as intra-unit flows of goods and services. The volume of global private financial flows reported by the World Bank generally differs from that reported by other sources because of differences in sources, classification of economies, and method used to adjust and disaggregate reported information. In addition, particularly for debt financing, differences may also reflect how some installments of the transactions and certain offshore issuances are treated.
Limitations and exceptions	Data on equity flows are shown for all countries for which data are available.
General comments	Note: Data starting from 2005 are based on the sixth edition of the IMF's Balance of Payments Manual (BPM6).
License Type	Open
Indicator Name	Foreign direct investment, net outflows (BoP, current US$)
Long definition	Foreign direct investment refers to direct investment equity flows in an economy. It is the sum of equity capital, reinvestment of earnings, and other capital. Direct investment is a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy. Ownership of 10 percent or more of the ordinary shares of voting stock is the criterion for determining the existence of a direct investment relationship. This series shows net outflows of investment from the reporting economy to the rest of the world. Data are in current U.S. dollars.
Source	International Monetary Fund, Balance of Payments database, supplemented by data from the United Nations Conference on Trade and Development and official national sources.
Topic	Economic Policy & Debt: Balance of payments: Capital & financial account
Periodicity	Annual
Aggregation method	Weighted average
Statistical concept and methodology	Data on equity flows are based on balance of payments data reported by the International Monetary Fund (IMF). Foreign direct investment (FDI) data are supplemented by the World Bank staff estimates using data from the United Nations Conference on Trade and Development (UNCTAD) and official national sources. The internationally accepted definition of FDI (from the sixth edition of the IMF's Balance of Payments Manual [2009]), includes the following components: equity investment, including investment associated with equity that gives rise to control or influence; investment in indirectly influenced or controlled enterprises; investment in fellow enterprises; debt (except selected debt); and reverse investment. The Framework for Direct Investment Relationships provides criteria for determining whether cross-border ownership results in a direct investment relationship, based on control and influence. Distinguished from other kinds of international investment, FDI is made to establish a lasting interest in or effective management control over an enterprise in another country. A lasting interest in an investment enterprise typically involves establishing warehouses, manufacturing facilities, and other permanent or long-term organizations abroad. Direct investments may take the form of greenfield investment, where the investor starts a new venture in a foreign country by constructing new

	operational facilities; joint venture, where the investor enters into a partnership agreement with a company abroad to establish a new enterprise; or merger and acquisition, where the investor acquires an existing enterprise abroad. The IMF suggests that investments should account for at least 10 percent of voting stock to be counted as FDI. In practice many countries set a higher threshold. Many countries fail to report reinvested earnings, and the definition of long-term loans differs among countries. BoP refers to Balance of Payments.
Development relevance	Private financial flows - equity and debt - account for the bulk of development finance. Equity flows comprise foreign direct investment (FDI) and portfolio equity. Debt flows are financing raised through bond issuance, bank lending, and supplier credits.
Limitations and exceptions	FDI data do not give a complete picture of international investment in an economy. Balance of payments data on FDI do not include capital raised locally, an important source of investment financing in some developing countries. In addition, FDI data omit nonequity cross-border transactions such as intra-unit flows of goods and services.The volume of global private financial flows reported by the World Bank generally differs from that reported by other sources because of differences in sources, classification of economies, and method used to adjust and disaggregate reported information. In addition, particularly for debt financing, differences may also reflect how some installments of the transactions and certain offshore issuances are treated.Data on equity flows are shown for all countries for which data are available.
General comments	Note: Data starting from 2005 are based on the sixth edition of the IMF's Balance of Payments Manual (BPM6).
License Type	Open
Indicator Name	GDP (constant LCU)
Long definition	GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in constant local currency.
Source	World Bank national accounts data, and OECD National Accounts data files.
Topic	Economic Policy & Debt: National accounts: Local currency at constant prices: Aggregate indicators
Periodicity	Annual
Base Period	varies by country
License Type	Open
Indicator Name	GDP (current LCU)

Long definition	GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in current local currency.
Source	World Bank national accounts data, and OECD National Accounts data files.
Topic	Economic Policy & Debt: National accounts: Local currency at current prices: Aggregate indicators
Periodicity	Annual
License Type	Open

Indicator Name	GDP growth (annual %)
Long definition	Annual percentage growth rate of GDP at market prices based on constant local currency. Aggregates are based on constant 2005 U.S. dollars. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.
Source	World Bank national accounts data, and OECD National Accounts data files.
Topic	Economic Policy & Debt: National accounts: Growth rates
Periodicity	Annual
Aggregation method	Weighted average
Statistical concept and methodology	Gross domestic product (GDP) represents the sum of value added by all its producers. Value added is the value of the gross output of producers less the value of intermediate goods and services consumed in production, before accounting for consumption of fixed capital in production. The United Nations System of National Accounts calls for value added to be valued at either basic prices (excluding net taxes on products) or producer prices (including net taxes on products paid by producers but excluding sales or value added taxes). Both valuations exclude transport charges that are invoiced separately by producers. Total GDP is measured at purchaser prices. Value added by industry is normally measured at basic prices. When value added is measured at producer prices. Growth rates of GDP and its components are calculated using the least squares method and constant price data in the local currency. Constant price U.S. dollar series are used to calculate regional and income group growth rates. Local currency series are converted to constant U.S. dollars using an exchange rate in the common reference year.
Development relevance	An economy's growth is measured by the change in the volume of its output or in the real incomes of its residents. The 2008 United Nations System of National Accounts (2008 SNA) offers three plausible indicators for calculating growth: the volume of gross domestic product (GDP), real gross domestic income, and real gross national income. The volume of GDP is the sum of value added, measured at constant prices, by households, government, and industries operating in the economy. GDP accounts for all domestic production, regardless of whether the income accrues to domestic or foreign institutions.

	Each industry's contribution to growth in the economy's output is measured by growth in the industry's value added. In principle, value added in constant prices can be estimated by measuring the quantity of goods and services produced in a period, valuing them at an agreed set of base year prices, and subtracting the cost of intermediate inputs, also in constant prices. This double-deflation method requires detailed information on the structure of prices of inputs and outputs.In many industries, however, value added is extrapolated from the base year using single volume indexes of outputs or, less commonly, inputs. Particularly in the services industries, including most of government, value added in constant prices is often imputed from labor inputs, such as real wages or number of employees. In the absence of well defined measures of output, measuring the growth of services remains difficult.Moreover, technical progress can lead to improvements in production processes and in the quality of goods and services that, if not properly accounted for, can distort measures of value added and thus of growth. When inputs are used to estimate output, as for nonmarket services, unmeasured technical progress leads to underestimates of the volume of output. Similarly, unmeasured improvements in quality lead to underestimates of the value of output and value added. The result can be underestimates of growth and productivity improvement and overestimates of inflation.Informal economic activities pose a particular measurement problem, especially in developing countries, where much economic activity is unrecorded. A complete picture of the economy requires estimating household outputs produced for home use, sales in informal markets, barter exchanges, and illicit or deliberately unreported activities. The consistency and completeness of such estimates depend on the skill and methods of the compiling statisticians.Rebasing of national accounts can alter the measured growth rate of an economy and lead to breaks in series that affect the consistency of data over time. When countries rebase their national accounts, they update the weights assigned to various components to better reflect current patterns of production or uses of output. The new base year should represent normal operation of the economy - it should be a year without major shocks or distortions. Some developing countries have not rebased their national accounts for many years. Using an old base year can be misleading because implicit price and volume weights become progressively less relevant and useful.To obtain comparable series of constant price data for computing aggregates, the World Bank rescales GDP and value added by industrial origin to a common reference year. Because rescaling changes the implicit weights used in forming regional and income group aggregates, aggregate growth rates are not comparable with those from earlier editions with different base years. Rescaling may result in a discrepancy between the rescaled GDP and the sum of the rescaled components. To avoid distortions in the growth rates, the discrepancy is left unallocated.
Limitations and exceptions	As a result, the weighted average of the growth rates of the components generally does not equal the GDP growth rate.
License Type	Open

Indicator Name	GDP per capita, PPP (constant 2011 international $)
Long definition	GDP per capita based on purchasing power parity (PPP). PPP GDP is gross domestic product converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GDP as the U.S. dollar has in the United States. GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in constant 2011 international dollars.

Source	World Bank, International Comparison Program database.
Topic	Economic Policy & Debt: Purchasing power parity
Periodicity	Annual
Base Period	2011
Aggregation method	Weighted average
License Type	Open

Indicator Name	GDP, PPP (constant 2011 international $)
Long definition	PPP GDP is gross domestic product converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GDP as the U.S. dollar has in the United States. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in constant 2011 international dollars.
Source	World Bank, International Comparison Program database.
Topic	Economic Policy & Debt: Purchasing power parity
Periodicity	Annual
Base Period	2011
Aggregation method	Gap-filled total
License Type	Open

Indicator Name	GDP, PPP (constant 2011 international $)
Long definition	PPP GDP is gross domestic product converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GDP as the U.S. dollar has in the United States. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in constant 2011 international dollars.
Source	World Bank, International Comparison Program database.
Topic	Economic Policy & Debt: Purchasing power parity
Periodicity	Annual
Base Period	2011
Aggregation method	Gap-filled total
License Type	Open

Indicator Name	GDP, PPP (current international $)
Long definition	PPP GDP is gross domestic product converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GDP as the U.S. dollar has in the United States. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in current international dollars. For most economies PPP figures are extrapolated

	from the 2011 International Comparison Program (ICP) benchmark estimates or imputed using a statistical model based on the 2011 ICP. For 47 high- and upper middle-income economies conversion factors are provided by Eurostat and the Organisation for Economic Co-operation and Development (OECD).
Source	World Bank, International Comparison Program database.
Topic	Economic Policy & Debt: Purchasing power parity
Periodicity	Annual
Aggregation method	Gap-filled total
Statistical concept and methodology	Because exchange rates do not always reflect differences in price levels between countries, GDP and GDP per capita estimates are converted into international dollars using purchasing power parity (PPP) rates. PPP rates provide a standard measure allowing comparison of real levels of expenditure between countries, just as conventional price indexes allow comparison of real values over time. PPP rates are calculated by simultaneously comparing the prices of similar goods and services among a large number of countries. In the most recent round of price surveys conducted by the International Comparison Program (ICP) in 2011, 199 economies participated. The PPP conversion factors come from three sources. For 47 high- and upper middle-income countries conversion factors are provided by Eurostat and the Organisation for Economic Co-operation and Development (OECD). For the remaining 2011 ICP countries the PPP estimates are extrapolated from the 2011 ICP benchmark results, which account for relative price changes between each economy and the United States. For countries that did not participate in the 2011 ICP round, the PPP estimates are imputed using a statistical model. More information on the results of the 2011 ICP is available at www.worldbank.org/data/icp.
License Type	Open

Indicator Name	General government final consumption expenditure (constant 2005 US$)
Long definition	General government final consumption expenditure (formerly general government consumption) includes all government current expenditures for purchases of goods and services (including compensation of employees). It also includes most expenditures on national defense and security, but excludes government military expenditures that are part of government capital formation. Data are in constant 2005 U.S. dollars.
Source	World Bank national accounts data, and OECD National Accounts data files.
Topic	Economic Policy & Debt: National accounts: US$ at constant 2005 prices: Expenditure on GDP
Periodicity	Annual
Base Period	2005
Aggregation method	Gap-filled total
Statistical concept and methodology	Gross domestic product (GDP) from the expenditure side is made up of household final consumption expenditure, general government final consumption expenditure, gross capital formation (private and public investment in fixed assets, changes in inventories, and net acquisitions of valuables), and net exports (exports minus imports) of goods and services. Such expenditures are recorded in purchaser prices and include net taxes on products.
Development relevance	An economy's growth is measured by the change in the volume of its output or in the real incomes of its residents. The 2008 United Nations System of National Accounts (2008

	SNA) offers three plausible indicators for calculating growth: the volume of gross domestic product (GDP), real gross domestic income, and real gross national income. The volume of GDP is the sum of value added, measured at constant prices, by households, government, and industries operating in the economy. GDP accounts for all domestic production, regardless of whether the income accrues to domestic or foreign institutions. Because policymakers have tended to focus on fostering the growth of output, and because data on production are easier to collect than data on spending, many countries generate their primary estimate of GDP using the production approach. Moreover, many countries do not estimate all the components of national expenditures but instead derive some of the main aggregates indirectly using GDP (based on the production approach) as the control total. Measures of growth in consumption and capital formation are subject to two kinds of inaccuracy. The first stems from the difficulty of measuring expenditures at current price levels. The second arises in deflating current price data to measure volume growth, where results depend on the relevance and reliability of the price indexes and weights used. Measuring price changes is more difficult for investment goods than for consumption goods because of the one-time nature of many investments and because the rate of technological progress in capital goods makes capturing change in quality difficult. (An example is computers - prices have fallen as quality has improved.) To obtain government consumption in constant prices, countries may deflate current values by applying a wage (price) index or extrapolate from the change in government
Limitations and exceptions	employment. Neither technique captures improvements in productivity or changes in the quality of government services.
License Type	Open
Indicator Name	General government final consumption expenditure (constant LCU)
Long definition	General government final consumption expenditure (formerly general government consumption) includes all government current expenditures for purchases of goods and services (including compensation of employees). It also includes most expenditures on national defense and security, but excludes government military expenditures that are part of government capital formation. Data are in constant local currency.
Source	World Bank national accounts data, and OECD National Accounts data files.
Topic	Economic Policy & Debt: National accounts: Local currency at constant prices: Expenditure on GDP
Periodicity	Annual
Base Period	varies by country
License Type	Open
Indicator Name	GNI (constant LCU)
Long definition	GNI (formerly GNP) is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output plus net receipts of primary income (compensation of employees and property income) from abroad. Data are in constant local currency.
Source	World Bank national accounts data, and OECD National Accounts data files.
Topic	Economic Policy & Debt: National accounts: Local currency at constant prices: Aggregate indicators

Periodicity	Annual
License Type	Open

Indicator Name	GNI (constant 2005 US$)
Long definition	GNI (formerly GNP) is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output plus net receipts of primary income (compensation of employees and property income) from abroad. Data are in constant 2005 U.S. dollars.
Source	World Bank national accounts data, and OECD National Accounts data files.
Topic	Economic Policy & Debt: National accounts: US$ at constant 2005 prices: Aggregate indicators
Periodicity	Annual
Base Period	2005
Aggregation method	Gap-filled total
Development relevance	Because development encompasses many factors - economic, environmental, cultural, educational, and institutional - no single measure gives a complete picture. However, the total earnings of the residents of an economy, measured by its gross national income (GNI), is a good measure of its capacity to provide for the well-being of its people.
License Type	Open

Indicator Name	GNI growth (annual %)
Long definition	GNI (formerly GNP) is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output plus net receipts of primary income (compensation of employees and property income) from abroad.
Source	World Bank national accounts data, and OECD National Accounts data files.
Topic	Economic Policy & Debt: National accounts: Growth rates:
Periodicity	Annual
Aggregation method	Weighted average
License Type	Open

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Appendix 2 Financial Ratio Formulas

Table 1	
Ratio Analysis	
Liquidity	
Current Ratio	Currents assets / Current liabilities
Quick Ratio	(Currents assets-Inventories) / Current liabilities
Leverage	
Debt Ratio	Total liabilities / Total assets
Equity Ratio	Shareholders' equity / Total assets
Equity to Debt	Shareholders' equity / Total liabilities
Activity	
Asset Turnover	Net sales / Total assets
Fixed Assets Turnover	Net sales / Fixed assets
Return on Asset	Net profit / Total assets
Return on Equity	Net profit / Equity
EBIT to Invested Capital	EBIT / (Total liabilities + Equity)
EBITDA Margin	EBITDA / Net sales
Net Profit Margin	Net profit / Net sales
Gross Profit Margin	Gross profit / Net sales
Operating Expenses Ratio	Operating expenses / Net sales
Owner's Equity Turnover Ratio	Net sales / Equity

Appendix 3 Top 30 Globally Listed Companies per Economy

Appendix 3.1 Key Definitions for Top Listed Companies

Ranking	**The Global Ranking of the Company**
Name	**The Company's Common Name**
CR	**Current Ratio**
QR	**Quick Ratio**
TL	**Total Liabilities**
TA	**Total Assets**
TC	**Total Capital**
TL2	**Total Liabilities**
EBIT	**Earnings Before Interest and Tax**
TIE	**Total Interest Expense**
NI	**Net Income**
CSE	**Common Shareholder's Equity**

Appendix 3.2 Top Listed Companies in America (Global Rank 1)

	RANKING	NAME			CR	QR
1	3	JPMorgan Chase	902242	JP MORGAN CHASE & CO.		
2	4	General Electric	906150	GENERAL ELECTRIC	1.12	1.02
3	5	Exxon Mobil	905039	EXXON MOBIL	1	0.7
4	9	Berkshire Hathaway	982325	BERKSHIRE HATHAWAY 'A'	1.97	1.76
5	12	Wells Fargo	906195	WELLS FARGO & CO		
6	13	Chevron	905024	CHEVRON	1.63	1.25
7	15	Wal-Mart Stores	916548	WAL MART STORES	0.83	0.2
8	15	Apple	992816	APPLE	1.5	1.24
9	19	Citigroup	741344	CITIGROUP		
10	24	AT&T	945388	AT&T	0.71	0.56
11	28	Bank of America	923937	BANK OF AMERICA		
12	34	IBM	515269	INTERNATIONAL BCSH.		
13	35	Proctor & Gamble	912228	PROCTER & GAMBLE	0.88	0.42
14	37	Pfizer	904030	PFIZER	2.15	1.58
15	41	Microsoft	719643	MICROSOFT	2.6	2.42
16	46	Johnson & Johnson	912212	JOHNSON & JOHNSON	1.9	1.34
17	49	Goldman Sachs Group	696738	GOLDMAN SACHS GP.		
18	53	Ford Motor	902230	FORD MOTOR	1.32	1.16
19	56	Comcast	981550	COMCAST 'A'	1.2	1.09
20	62	American International Group				
21	68	Google	29026M	ALPHABET 'A'	4.22	3.99
22	70	General Motors	68470T	GENERAL MOTORS	1.3	0.79
23	73	ConocoPhillips	901666	CONOCOPHILLIPS	1.38	0.86
24	77	Intel	922726	INTEL	2.43	1.79
25	79	Coca-Cola	904282	COCA COLA	1.09	0.78
26	80	Cisco Systems	542868	CISCO SYSTEMS	3.49	3.2
27	82	Merck & Co	905019	MERCK & COMPANY	1.9	1.33
28	88	PepsiCo	905677	PEPSICO	1.1	0.8
29	90	UnitedHealth Group				
30	92	United Technologies	905122	UNITED TECHNOLOGIES	1.24	0.67

	TL	TA	TC	TL2	TC2
1	2155072000	2359141000	421757000	2155072000	421757000
2	556858000	685328000	441138000	556858000	441138000
3	162135000	333795000	179588000	162135000	179588000
4	235864000	427452000	243813000	235864000	243813000
5	1264057000	1422968000	270329000	1264057000	270329000
6	92488000	230320000	149897000	92488000	149897000
7	120848000	203105000	123674000	120848000	123674000
8	57854000	176064000	118210000	57854000	118210000
9	1673663000	1864660000	387809000	1673663000	387809000
10	179620000	272315000	159053000	179620000	159053000
11	1939980000	2176936000	457344000	1939980000	457344000
12	10446965	11882673	2440332	10446965	2440332
13	68209000	132244000	85115000	68209000	85115000
14	104120000	185798000	112714000	104120000	112714000
15	54908000	121271000	77076000	54908000	77076000
16	51980000	116806000	76315000	51980000	76315000
17	856711000	932935000	328711000	856711000	328711000
18	162546000	178857000	82607000	162546000	82607000
19	96677000	164971000	106376000	96677000	106376000
20					
21	22083000	93798000	74703000	22083000	74703000
22	84500000	121500000	47532000	84500000	47532000
23	68495000	116922000	69197000	68495000	69197000
24	32790000	83993000	64339000	32790000	64339000
25	52603000	85771000	47904000	52603000	47904000
26	38188000	89489000	67598000	38188000	67598000
27	50142000	105605000	71717000	50142000	71717000
28	52239000	74638000	45943000	52239000	45943000
29					
30	60503000	87810000	48904000	60503000	48904000

	EBIT	TIE	NI	NI	CSE
1	34979000	11153000	19877000	19877000	195011000
2	16672000		14217000	14217000	123026000
3	64043000		44880000	44880000	165863000
4	24980000		14824000	14824000	187647000
5	31826000	5161000	17999000	17999000	144671000
6	39443000		26179000	26179000	136524000
7	27988000		16999000	16999000	76343000
8	55763000		41733000	41733000	118210000
9	17124000	20535000	7350000	7350000	186487000
10	13131000		7264000	7264000	92362000
11	10421000	16744000	2758000	2758000	217889000
12	165993	74499	93473	93473	1435708
13	13551000		9083000	9083000	62244000
14	13604000		9785000	9785000	81221000
15	22647000		16978000	16978000	66363000
16	14262000		10853000	10853000	64826000
17	16990000	5783000	7292000	7292000	69516000
18	11153000		5665000	5665000	15947000
19	13171000		6203000	6203000	49356000
20					
21	13470000		10737000	10737000	71715000
22	-29768000		4859000	4859000	24342000
23	14221000		8428000	8428000	47987000
24	15044000		11005000	11005000	51203000
25	11422000		9019000	9019000	32790000
26	10753000		8041000	8041000	51286000
27	8811000		6165000	6165000	53020000
28	9162000		6171000	6171000	22253000
29					
30	7723000		5130000	5130000	25914000

Appendix 3.3 Top Listed Companies in China (Global Rank 2)

	RANKING	NAME			CR	QR
1	1	ICBC	41239N	IND & COML.BK.OF CHINA 'A'		
2	2	China Construction Bank	51063R	CHINA CON.BANK 'A'		
3	8	Agricultural Bank of China	69643W	AGRICULTURAL BANK OF CHINA 'A'		
4	9	PetroChina	51219T	PETROCHINA 'A'	0.72	0.29
5	11	Bank of China	36146P	BANK OF CHINA 'A'		
6	26	Sinopec-China Petroleum	143887	SINOPEC OILFIELD SERVICE	1.78	1.05
7	54	Bank of Communications	50442K	BANK OF COMMS.'A'		
8	83	Ping An Insurance Group	412681	PING AN INSURANCE (GP.) CO. OF CHINA		
9	101	China Merchants Bank	15394J	CHINA MERCHANTS BANK 'A'		
10	106	China Life Insurance	41533M	CHINA LIFE INSURANCE 'A'		
11	107	China Minsheng Banking	256846	CHINA MINSHENG BANKING 'A'		
12	115	China Shenhua Energy	51089N	CHINA SHENHUA EN.'A'	1.05	0.87
13	125	Shanghai Pudong Development	691918	SHAI.PUDONG DEV.BK. 'A'		
14	128	China Citic Bank	50385C	CHINA CITIC BANK 'A'		
15	139	China Telecom	26337N	CHINA UTD.NET.COMMS.'A	0.16	0.13
16	142	Industrial Bank	41693H	INDUSTRIAL BANK 'A'		
17	167	SAIC Motor	877264	SAIC MOTOR 'A'	1.21	0.83
18	206	China State Construction	67747V	CHINA STATE CON.ENGR.'A	1.35	0.79
19	226	People's Insurance Company	87025J	PEOPLE CN 'A'	9.07	8.99
20	240	China Everbright Bank	69875R	CHINA EVERBRIGHT BK.'A'		
21	278	China Pacific Insurance	51389H	CHINA PAC.IN.(GROUP) 'A'		
22	280	Construction				
23	283	Ping An Bank	141353	PING AN BANK 'A'		
24	314	China Vanke	141354	CHINA VANKE 'A' SUSP - SU	1.4	0.29
25	316	China Railway Construction	51650M	CHINA RAILWAY CON.'A'	1.13	0.57
26	322	China Railway Group	51279M	CHINA RAILWAY GROUP 'A'	1.19	0.86
27	370	Baoshan Iron & Steel	255957	BAOSHAN IRON & STL.'A'	0.84	0.39
28	404	Huaneng Power International	14866D	HUANENG POWER INTL.'A'	0.39	0.3
29	407	Huaxia Bank	27576T	HUAXIA BANK 'A'		
30	473	China Coal Energy	51554U	CHINA COAL ENERGY 'A'	1.45	1.17

	TL	TA	TC	TL2	TC2
1	16390969000	17519428000	1416774000	16390969000	1416774000
2	12996168000	13945777000	1121161000	12996168000	1121161000
3	12436039000	13187393000	1311966000	12436039000	1311966000
4	986705000	2167453000	1474522000	986705000	1474522000
5	11797781000	12659323000	1324872000	11797781000	1324872000
6	2257579	10826165	8568586	2257579	8568586
7	4879431000	5260878000	841109000	4879431000	841109000
8	2615129000	2824245000	665191000	2615129000	665191000
9	3202725000	3403232000	264605000	3202725000	264605000
10	1681206000	1898916000	291082000	1681206000	291082000
11	3034640000	3203184000	265147000	3034640000	265147000
12	149704000	456261000	346181000	149704000	346181000
13	2960412000	3140071000	248259000	2960412000	248259000
14	2750762000	2953848000	250830000	2750762000	250830000
15	301064586	513298899	214987078	301064586	214987078
16	3075404000	3246039000	238326000	3075404000	238326000
17	160979520	309666365	149633624	160979520	149633624
18	507690425	647284875	253329614	507690425	253329614
19	253933	2441200	2187267	253933	2187267
20	2162519000	2276841000	167022000	2162519000	167022000
21	567745000	665314000	113069000	567745000	113069000
22					
23	1518288344	1603087119	100877388	1518288344	100877388
24	293736767	375874962	118174265	293736767	118174265
25	405341892	478671199	107731549	405341892	107731549
26	457712000	546760000	177680000	457712000	177680000
27	94300013	212330765	130598181	94300013	130598181
28	191933957	258567985	162083540	191933957	162083540
29	1410845939	1485661295	85615356	1410845939	85615356
30	83889657	185310075	141497740	83889657	141497740

	EBIT	TIE	NI	NI	CSE
1	316763000	303611000	238532000	238532000	1124997000
2	261050000	250039000	193179000	193179000	941732000
3	193130000	224184000	145094000	145094000	749815000
4	176713000		115326000	115326000	1064010000
5	194806000	249564000	139432000	139432000	824677000
6	-539594		-358456	-358456	8513483
7	78793000	120470000	58373000	58373000	379918000
8	36187000		20050000	20050000	159084000
9	62271000	61727000	45273000	45273000	200434000
10	12538000		11061000	11061000	215694000
11	60699000	74734000	37563000	37563000	163077000
12	70849000		48858000	48858000	256589000
13	47503000	76881000	34186000	34186000	177497000
14	43983000	63324000	31032000	31032000	198356000
15	12672949		2368107	2368107	72297283
16	57056000	83562000	34718000	34718000	169577000
17	40918017		20751763	20751763	122337367
18	35456651		15735236	15735236	101819638
19	224445		210306	210306	2143799
20	36962000	53708000	23591000	23591000	114178000
21	8401000		5077000	5077000	96177000
22					
23	18509159	41578323	13402701	13402701	84798775
24	26547164		12551182	12551182	63825554
25	15731090		8478891	8478891	71963667
26	17369000		7354000	7354000	78194000
27	15236072		10386373	10386373	111387269
28	17151524		5512454	5512454	56130134
29	18133542	38051154	12796281	12796281	74786940
30	13627567		8842210	8842210	86726393

Appendix 3.4 Top Listed Companies in Japan (Global Rank 3)

	RANKING	NAME			CR	QR
1	27	Mitsubishi UFJ Financial	256938	MITSUBISHI UFJ FINL.GP.		
2	31	Toyota Motor	905289	TOYOTA MOTOR	1.05	0.81
3	46	Nippon Telegraph & Tel	740847	NIPPON TELG. & TE	1.35	1.1
4	51	Sumitomo Mitsui Financial	912033	SUMITOMO MITSUI FINL.GP.		
5	78	Mizuho Financial	264051	MIZUHO FINL.GP.		
6	85	Nissan Motor	922362	NISSAN MOTOR	1.59	1.16
7	86	Honda Motor	912109	HONDA MOTOR	1.32	0.88
8	110	Mitsubishi Corp	912177	MITSUBISHI	1.38	1.07
9	117	Hitachi	912080	HITACHI	1.2	0.73
10	126	Mitsui & Co	922020	MITSUI	1.69	1.34
11	148	Softbank	140292	SOFTBANK GROUP	0.99	0.85
12	172	Itochu	932197	ITOCHU	1.38	0.95
13	181	Canon	912507	CANON	2.47	1.5
14	191	Japan Tobacco	140619	JAPAN TOBACCO	1.15	0.64
15	199	KDDI	317701	KDDI	1.35	1.18
16	214	JX Holdings	68923J	JX HOLDINGS	1.13	0.49
17	215	Sumitomo Corp	932252	SUMITOMO	1.61	1.11
18	220	East Japan Railway	317648	EAST JAPAN RAILW	0.55	0.43
19	221	Seven & I Holdings	982367	SEVEN & I HDG.	1.09	0.79
20	248	Bridgestone	912005	BRIDGESTONE	1.66	0.88
21	249	Sumitomo Mitsui Trust	503004	SUMITOMO MITSUI TST.HDG.		
22	252	Marubeni	930446	MARUBENI	1.44	1
23	263	Toshiba	923813	TOSHIBA	1.13	0.65
24	264	Denso	923879	DENSO	2.61	2.02
25	281	Takeda Pharmaceutical	912087	TAKEDA PHARMAC	1.7	1.06
26	302	Central Japan Railway	890954	CENTRAL JAPAN RA	0.44	0.3
27	303	Mitsubishi Electric	932074	MITSUBISHI ELECTF	1.53	0.94
28	305	Metal	502501	METALART	1.01	0.79
29	331	Komatsu	906433	KOMATSU	1.62	0.74
30	335	Resona Holdings	936441	RESONA HOLDINGS		

	TL	TA	TC	TL2	TC2
1	2.06663E+11	2.18339E+11	20369673000	2.06663E+11	2.037E+10
2	19492630000	30559108000	17108755000	19492630000	1.711E+10
3	8552677000	18600406000	13594468000	8552677000	1.359E+10
4	1.35382E+11	1.42637E+11	13367786000	1.35382E+11	1.337E+10
5	1.58131E+11	1.65001E+11	13079784000	1.58131E+11	1.308E+10
6	7529678000	10979675000	5947540000	7529678000	5.948E+09
7	7070723000	11599013000	6763291000	7070723000	6.763E+09
8	8731925000	12560212000	7588388000	8731925000	7.588E+09
9	6540228000	9314223000	4157889000	6540228000	4.158E+09
10	6135387000	8996197000	5759028000	6135387000	5.759E+09
11	3359738000	4795378000	2861346000	3359738000	2.861E+09
12	4730403000	6426544000	3955858000	4730403000	3.956E+09
13	1079267000	3833569000	2756419000	1079267000	2.756E+09
14	1820207000	3534833000	1994376000	1820207000	1.994E+09
15	1770556000	3899180000	2779901000	1770556000	2.78E+09
16	4595421000	6640173000	3176632000	4595421000	3.177E+09
17	5323558000	7124746000	4782736000	5323558000	4.783E+09
18	4927811000	6818444000	4930237000	4927811000	4.93E+09
19	1988257000	3849211000	2358220000	1988257000	2.358E+09
20	1509883000	2928977000	1754091000	1509883000	1.754E+09
21	31847690000	34184721000	3883723000	31847690000	3.884E+09
22	4174740000	5090510000	3184322000	4174740000	3.184E+09
23	4117907000	5354429000	2146142000	4117907000	2.146E+09
24	1439476000	3556677000	2580545000	1439476000	2.581E+09
25	1484932000	3556798000	2389727000	1484932000	2.39E+09
26	3679465000	5042716000	3960533000	3679465000	3.961E+09
27	2028427000	3219447000	1532809000	2028427000	1.533E+09
28	13936792	22725827	8806659	13936792	8806659
29	1223386000	2280843000	1369976000	1223386000	1.37E+09
30	41187144000	43030473000	2668709000	41187144000	2.669E+09

	EBIT	TIE	NI	NI	CSE
1	1611465000	508874000	963126000	963126000	9610962000
2	455795000		283559000	283559000	10550261000
3	1295656000		467701000	467701000	7882587000
4	1107843000	290223000	518536000	518536000	5001090000
5	826338000	335223000	475847000	475847000	3960154000
6	562221000		341433000	341433000	3149114000
7	267781000		211482000	211482000	4402614000
8	500429000		453849000	453849000	3509328000
9	582696000		347179000	347179000	1771782000
10	455823000		434497000	434497000	2641318000
11	694462000		313752000	313752000	937593000
12	364159000		300505000	300505000	1363797000
13	343579000		224564000	224564000	2598026000
14	455732000		320883000	320883000	1634050000
15	467310000		238604000	238604000	2061875000
16	381432000		170595000	170595000	1744203000
17	370343000		250669000	250669000	1689056000
18	334971000		108737000	108737000	1874404000
19	237790000		129837000	129837000	1767206000
20	284513000		171605000	171605000	1375139000
21	323172000	121067000	160050000	160050000	1717850000
22	291736000		172125000	172125000	852172000
23	184220000		73705000	73705000	867268000
24	170079000		89298000	89298000	2012574000
25	254361000		124162000	124162000	2012344000
26	298465000		132781000	132781000	1321654000
27	230898000		112063000	112063000	1132465000
28	1785760		966023	966023	8789035
29	257393000		167041000	167041000	1009696000
30	295488000	56257000	236668000	236668000	885439000

Appendix 3.5 Top Listed Companies in Germany (Global Rank 4)

	RANKING	NAME			CR	QR
1	14	Volkswagen Group	905009	VOLKSWAGEN	1.07	0.75
2	25	Allianz	916641	ALLIANZ		
3	36	Daimler	688700	DAIMLER	1.15	0.83
4	51	Siemens	902192	SIEMENS	1.22	0.73
5	55	BMW Group	923537	BMW	1.04	0.77
6	69	BASF	904881	BASF	1.69	0.86
7	81	Munich Re	929084	MUENCHENER RUCK.		
8	99	E.ON	916235	E ON	1.2	0.82
9	120	Bayer	905243	BAYER	1.45	0.9
10	177	RWE Group	902191	RWE	1.02	0.78
11	190	Deutsche Post	280598	DEUTSCHE POST	0.97	0.82
12	211	SAP	775543	SAP	1.05	1.02
13	235	Continental	929030	CONTINENTAL	0.99	0.7
14	271	Linde	923551	LINDE	0.98	0.82
15	301	Deutsche Bank	905076	DEUTSCHE BANK		
16	317	Henkel	866980	HENKEL	1.31	1.03
17	329	Fresenius	307694	FRESENIUS	1.34	0.91
18	403	Deutsche Lufthansa	929114	DEUTSCHE LUFTHA	1	0.91
19	413	Talanx	87677M	TALANX AKTGSF.		
20	433	Deutsche Telekom	882362	DEUTSCHE TELEKOI	0.65	0.55
21	451	Merck	301774	MERCK KGAA	1.46	1.11
22	462	Porsche Automobil Holding	946281	PORSCHE AML.HLD	5.24	5.24
23	475	EnBW-Energie Baden	933063	ENBW ENGE.BADEI	1.25	0.98
24	570	Adidas	866013	ADIDAS	1.57	0.92
25	595	HeidelbergCement	929015	HEIDELBERGCEMEI	1.18	0.8
26	654	Commerzbank	902189	COMMERZBANK		
27	654	ThyssenKrupp Group	929097	THYSSENKRUPP	1.26	0.41
28	684	Deutsche Boerse	13454U	DEUTSCHE BOERSE	1	1
29	690	Metro Group	882059	METRO	0.87	0.41
30	930	Beirsdorf	929048	BEIERSDORF	2.11	1.64

	TL	TA	TC	TL2	TC2
1	219904000	301729000	145428000	219904000	145428000
2	633745000	680097000	77041000	633745000	77041000
3	115194000	160704000	88850000	115194000	88850000
4	73203000	104505000	48182000	73203000	48182000
5	99447000	129849000	68572000	99447000	68572000
6	37565000	63369000	34979000	37565000	34979000
7	224934000	246411000	33679000	224934000	33679000
8	93879000	134985000	63043000	93879000	63043000
9	31186000	49755000	25332000	31186000	25332000
10	70863000	84598000	31854000	70863000	31854000
11	20700000	32864000	16577000	20700000	16577000
12	12004000	26175000	18617000	12004000	18617000
13	17561000	26705800	13325000	17561000	13325000
14	19350000	33008000	22576000	19350000	22576000
15	1950201000	2004611000	206903000	1950201000	206903000
16	9422000	18933000	11965000	9422000	11965000
17	16864000	30216000	23046000	16864000	23046000
18	20077000	28375000	14245000	20077000	14245000
19	113138000	122832000	15418000	113138000	15418000
20	72685000	103228000	65097000	72685000	65097000
21	10281900	20696700	13654500	10281900	13654500
22	1061000	31211000	30450000	1061000	30450000
23	28043000	36723500	14240600	28043000	14240600
24	5832000	11123000	6511000	5832000	6511000
25	13849800	27563200	20856500	13849800	20856500
26	603388000	632863000	144286000	603388000	144286000
27	32279000	36805000	9782000	32279000	9782000
28	213298500	216468100	4329600	213298500	4329600
29	27927000	34028000	12837000	27927000	12837000
30	2185000	5472000	3298000	2185000	3298000

	EBIT	TIE	NI	NI	CSE
1	26890000		21717000	21717000	77515000
2	10108000		5169000	5169000	43687000
3	8309000		6095000	6095000	43879000
4	7728000		4458000	4458000	30733000
5	8030000		5096000	5096000	30295000
6	9181000		4879000	4879000	24580000
7	4603000		3195000	3195000	21235000
8	4967000		2217000	2217000	34957000
9	3806000		2446000	2446000	18469000
10	3479000		1306000	1306000	12122000
11	3252000		1658000	1658000	11951000
12	3954000		2823000	2823000	14163000
13	3222800		1883500	1883500	8767400
14	2340000		1250000	1250000	13094000
15	4318000	16351000	237000	237000	54003000
16	2187000		1510000	1510000	9376000
17	3115000		930000	930000	7971000
18	1360000		874000	874000	8238000
19	1760000		630000	630000	5523000
20	-3891000		-5255000	-5255000	25920000
21	930900		566700	566700	10361400
22	8020000		7818000	7818000	30150000
23	1110900		473500	473500	5928400
24	948000		526000	526000	5304000
25	1228500		301200	301200	12614600
26	4529000	8863000	6000	6000	26146000
27	791000		-4668000	-4668000	3559000
28	970900		645000	645000	2946600
29	1388000		3000	3000	6024000
30	718000		442000	442000	3275000

Appendix 3.6 Top Listed Companies in France (Global Rank 5)

	RANKING	NAME			CR	QR
1	22	BNP Paribas	309449	BNP PARIBAS		
2	23	Total	912398	TOTAL	1.38	0.92
3	39	AXA Group	936732	AXA		
4	72	Sanofi	992594	SANOFI	1.65	1.17
5	74	EDF	32269V	EDF	1.17	0.9
6	95	GDF Suez	31270N	ENGIE	1.07	0.76
7	146	Société Générale	755457	SOCIETE GENERALE		
8	162	Vinci	772568	VINCI	0.87	0.83
9	169	France Telecom	885569	ORANGE	0.65	0.6
10	175	Renault	143366	RENAULT	1.04	0.94
11	177	L'Oréal Group	923386	L'OREAL	1.29	0.89
12	196	Christian Dior	539616	CHRISTIAN DIOR	1.32	0.47
13	204	Schneider Electric	998075	SCHNEIDER ELECTR	1.51	1.15
14	216	Carrefour	922029	CARREFOUR	0.9	0.59
15	230	Danone	912833	DANONE	0.81	0.67
16	253	Natixis	929283	NATIXIS		
17	260	Saint-Gobain	741689	SAINT GOBAIN	1.31	0.75
18	284	Air Luquide	923295	AIR LIQUIDE	1.03	0.79
19	294	CNP Assurances	685687	CNP ASSURANCES		
20	356	Michelin Group	912397	MICHELIN	1.87	1
21	368	Safran	929273	SAFRAN	1.13	0.75
22	378	Kering	923657	KERING	1.25	0.74
23	386	Alstom	682858	ALSTOM	0.92	0.52
24	390	Pernod Ricard	923539	PERNOD-RICARD	1.76	0.6
25	413	Lafarge	9813P9	LAFARGEHOLCIM (I	1	0.71
26	426	Bouygues	923500	BOUYGUES	0.99	0.77
27	460	Crédit Agricole	14866R	CREDIT AGRICOLE		
28	536	Vivendi	923139	VIVENDI	0.69	0.57
29	572	CIC Group	682851	CIC 'A'		
30	576	Veolia Environment	289374	VEOLIA ENVIRONNI	1.18	0.87

	TL	TA	TC	TL2	TC2
1	1804997000	1899419000	193708000	1804997000	193708000
2	95804000	169997000	96467000	95804000	96467000
3	703112000	748244000	66681000	703112000	66681000
4	38558000	96030000	68191000	38558000	68191000
5	215919000	246631000	76603000	215919000	76603000
6	132754000	203961000	115919000	132754000	115919000
7	1191480000	1245577000	82516000	1191480000	82516000
8	47318200	61388000	30279900	47318200	30279900
9	60002000	86386000	58267000	60002000	58267000
10	50451000	74998000	31109000	50451000	31109000
11	7870900	28807300	20983300	7870900	20983300
12	25373000	51382000	31145000	25373000	31145000
13	17595000	34411000	23222000	17595000	23222000
14	36731000	45092000	19310000	36731000	19310000
15	16577000	28843000	16708000	16577000	16708000
16	506458000	525217000	72250000	506458000	72250000
17	28436000	46287000	27417000	28436000	27417000
18	14194200	24638500	16249400	14194200	16249400
19	333002800	344119500	22870700	333002800	22870700
20	11452000	20052000	10602000	11452000	10602000
21	16514000	22742000	9157000	16514000	9157000
22	12537600	24656300	15107600	12537600	15107600
23	25141000	29575000	8757000	25141000	8757000
24	15438000	26410000	20268000	15438000	20268000
25	21177000	41014000	29698000	21177000	29698000
26	26404000	36482000	17580000	26404000	17580000
27	1793243000	1838475000	233148000	1793243000	233148000
28	38078000	59514000	21556000	38078000	21556000
29	224660000	235128000	30943000	224660000	30943000
30	34243300	43369000	22209400	34243300	22209400

	EBIT	TIE	NI	NI	CSE
1	14298000	16677000	6271000	6271000	85886000
2	24330000		10694000	10694000	72912000
3	5985000		4152000	4152000	42777000
4	6373000		4967000	4967000	57338000
5	6996000		3316000	3316000	25858000
6	6476000		1550000	1550000	59745000
7	4567000	11846000	483000	483000	49809000
8	3690800		1916700	1916700	13334400
9	4310000		820000	820000	24306000
10	2735000		1772000	1772000	24292000
11	3910400		2867700	2867700	20931600
12	5529000		1302000	1302000	10107000
13	2846000		1840000	1840000	16642000
14	1086000		1233000	1233000	7487000
15	2690000		1672000	1672000	12191000
16	2257000	4679000	826000	826000	18217000
17	1899000		766000	766000	17439000
18	2495600		1609400	1609400	10211700
19	2311000		893400	893400	9675600
20	2500000		1560000	1560000	8499000
21	1865000		1302000	1302000	6063000
22	1814800		1048200	1048200	11413800
23	1074000		732000	732000	4327000
24	1848000		1146000	1146000	10803000
25	2221000		622000	622000	16949000
26	1158000		633000	633000	8578000
27	3039000	17784000	-6471000	-6471000	39727000
28	2707000		164000	164000	18465000
29	1322000	7734000	698000	698000	10362000
30	1125600		-117800	-117800	7152100

Appendix 3.7 Top Listed Companies in the UK (Global Rank 6)

	RANKING	NAME			CR	QR
1	6	HSBC Holdings	507534	HSBC HDG. (ORD $0.50)		
2	18	BP	900995	BP	1.19	0.82
3	33	Vodafone	953133	VODAFONE GROUP	0.83	0.66
4	65	Prudential	901521	PRUDENTIAL		
5	98	Standard Chartered	901459	STANDARD CHARTERED		
6	105	Tesco	900803	TESCO	0.67	0.43
7	112	GlaxoSmithKline	900479	GLAXOSMITHKLINE	0.99	0.68
8	149	AstraZeneca	319608	ASTRAZENECA	1.37	1.14
9	159	British American Tobacco	901295	BRITISH AMERICAN	1.13	0.63
10	163	BG Group		In 2012 the BG group was sold to sta		
11	179	National Grid	870181	NATIONAL GRID	0.9	0.67
12	188	SABMiller	695504	SABMILLER	0.7	0.47
13	208	Legal & General Group	901518	LEGAL & GENERAL		
14	221	BT Group	900888	BT GROUP	0.49	0.33
15	224	Old Mutual	674070	OLD MUTUAL		
16	242	Diageo	900251	DIAGEO	1.52	0.64
17	245	Centrica	888276	CENTRICA	0.95	0.8
18	287	Standard Life	36228U	STANDARD LIFE		
19	291	Rolls-Royce Holding	940793	ROLLS-ROYCE HOLI	1.33	0.93
20	296	Imperial Tobacco Group	882240	IMPERIAL BRANDS	0.78	0.42
21	319	Reckitt Benckiser Group	900484	RECKITT BENCKISEF	0.47	0.35
22	325	BAE Systems	901419	BAE SYSTEMS	0.78	0.68
23	355	WPP	926119	WPP	0.94	0.73
24	390	Lloyds Banking Group	900856	LLOYDS BANKING GROUP		
25	400	Barclays	901443	BARCLAYS		
26	420	Royal Bank of Scotland	901450	ROYAL BANK OF SCTL.GP.		
27	435	Rio Tinto	901714	RIO TINTO	1.39	0.92
28	471	Compass Group	255049	COMPASS GROUP	0.9	0.75
29	473	Aon				
30	493	Associated British Foods	900825	ASSOCIATED BRIT.F	1.26	0.63

	TL	TA	TC	TL2	TC2
1	1538630985	1651255320	166286775	1538630985	166286775
2	110514885	184081185	97408005	110514885	97408005
3	59404000	137606000	104215000	59404000	104215000
4	290716000	301080000	14988000	290716000	14988000
5	362709780	391033605	74312295	362709780	74312295
6	32957000	50758000	27712000	32957000	27712000
7	32343000	39090000	21418000	32343000	21418000
8	17509665	32240145	20517015	17509665	20517015
9	19221000	27000000	16862000	19221000	16862000
	te-run Gujarat Gas Company for 470 million Financials aren't listed in my data.				
11	38089000	47335000	31048000	38089000	31048000
12	18303020	34431080	27389740	18303020	27389740
13	338006000	343486000	8290000	338006000	8290000
14	22014000	23322000	8907000	22014000	8907000
15	132018000	141751000	12848000	132018000	12848000
16	15210000	22021000	14417000	15210000	14417000
17	15842000	21769000	10783000	15842000	10783000
18	162315000	167011000	6628000	162315000	6628000
19	11680000	17785000	7339000	11680000	7339000
20	21413000	27497000	14417000	21413000	14417000
21	9109000	15031000	5925000	9109000	5925000
22	17125000	20899000	6741000	17125000	6741000
23	17725800	24786400	10741200	17725800	10741200
24	875583000	920267000	167090000	875583000	167090000
25	1424348000	1487305000	215370000	1424348000	215370000
26	1238404000	1308852000	179867000	1238404000	179867000
27	34480590	70242225	50806380	34480590	50806380
28	5693000	8934000	4949000	5693000	4949000
29					
30	3830000	10051000	7135000	3830000	7135000

	EBIT	TIE	NI	NI	CSE
1	14360929	12007930	8489474	8489474	106909755
2	9563411		7270503	7270503	72811695
3	6196000		6957000	6957000	76935000
4	3468000		2197000	2197000	10359000
5	5324168	4550657	3004890	3004890	27897630
6	4161000		2806000	2806000	17775000
7	7394000		4565000	4565000	5810000
8	5113210		3953571	3953571	14598255
9	5526000		3841000	3841000	7472000
10					
11	3617000		2036000	2036000	9239000
12	3203550		2659230	2659230	15545260
13	1375000		813000	813000	5441000
14	3088000		2002000	2002000	1297000
15	1527000		1141000	1141000	7768000
16	2877000		1942000	1942000	5588000
17	2632000		1273000	1273000	5927000
18	1042000		698000	698000	4355000
19	2583000		2281000	2281000	6088000
20	1631000		678000	678000	6035000
21	2456000		1829000	1829000	5921000
22	1463000		1068000	1068000	3720000
23	1279300		822700	822700	6811000
24	6656000	14460000	-1427000	-1427000	43999000
25	4697000	7560000	-1041000	-1041000	53586000
26	-2356000	7416000	-5971000	-5971000	68130000
27	-2112087		-1872877	-1872877	28821975
28	875000		605000	605000	3231000
29					
30	844000		555000	555000	5834000

Appendix 3.8 Top Listed Companies in Brazil (Global Rank 7)

	RANKING	NAME			CR	QR
1	20	Petrobras	321116	PETROLEO BRASILE	1.7	1.19
2	42	Itaú Unibanco Holding	321313	ITAU UNIBANCO HOLDING ON		
3	45	Banco Bradesco	501898	BANCO BRADESCO ON		
4	67	Banco do Brasil	772079	BANCO DO BRASIL ON		
5	87	Vale	320531	VALE ON	1.79	1.26
6	173	Itaúsa	321112	ITAUSA INVESTMENT ON		
7	597	Cemig	320681	CIA ENERGETICA DE	0.84	0.83
8	614	Grupo Pão de Açúcar	51349E	BMF BOVESPA BLV/	2.13	2.12
9	656	JBS	50356X	JBS ON	1.68	1.1
10	671	CSN	130679	COMPANHIA SIDER	3.3	2.73
11	734	BRF-Brasil Foods	130228	BRF BRASIL FOODS	1.55	0.91
12	819	Oi	131198	OI ON	1.24	1.16
13	836	CPFL Energia	29586L	CPFL ENERGIA ON	1.08	1.06
14	910	Sabesp	889901	CPAD.SANMT.BASIC	0.88	0.86
15	935	Eletrobrás	130169	CENTRAIS ELETR BR	1.44	0.8
16	1075	Cielo	67626W	CIELO ON	1.37	1.37
17	1156	Braskem	130158	BRASKEM ON	0.99	0.66
18	1158	BM&F Bovespa	51349E	BMF BOVESPA BLV/	2.13	2.12
19	1173	Metalurgica Gerdau	130211	METALURGICA GER	1.8	0.81
20	1211	Cosan	32350U	COSAN INDUSTRIA	2.27	1.91
21	1234	CCR	15165H	CMPH.COCS. RODO	0.43	0.39
22	1517	Embraer	130171	EMBRAER ON	1.92	1.09
23	1520	BR Malls	50314H	BR MALLS PARTICIPACOES ON		
24	1542	Natura Cosmeticos	28996D	NATURA COSMETIC	1.4	1.04
25	1574	Banrisul	131008	BANRISUL ON		
26	1586	Marfrig Group	50760T	MARFRIG FRIGORIF	1.33	0.83
27	1627	Usiminas	130269	USINAS SIDERURGI	2	1.29
28	1811	Lojas Americanas	992160	LOJAS AMERICANA	1.5	1.11
29	1908	Porto Seguro	29811E	PORTO SEGURO ON		
30	1914	WEG	131220	WEG ON	1.9	1.4

	TL	TA	TC	TL2	TC2
1	320990000	666423000	526427000	320990000	526427000
2	852775000	928773000	180331000	852775000	180331000
3	784253599	854889252	149160240	784253599	149160240
4	1064662406	1130732371	216534849	1064662406	216534849
5	103156000	258789000	213775000	103156000	213775000
6	320215000	352924000	111341000	320215000	111341000
7	27277105	39321167	21108066	27277105	21108066
8	4600946	24014828	20656121	4600946	20656121
9	28322887	49756193	35823352	28322887	35823352
10	38157820	47165333	36863863	38157820	36863863
11	15471266	30047306	21653579	15471266	21653579
12	53888654	73715272	50059086	53888654	50059086
13	21350008	29757069	23400009	21350008	23400009
14	14818860	26534437	19417506	14818860	19417506
15	102980165	170260758	115075844	102980165	115075844
16	7299989	9586096	4235205	7299989	4235205
17	31543502	40207302	24339410	31543502	24339410
18	4600946	24014828	20656121	4600946	20656121
19	24327986	51146338	38892219	24327986	38892219
20	11964737	21581111	14093316	11964737	14093316
21	10503345	13865677	8996999	10503345	8996999
22	12520853	19367335	10382109	12520853	10382109
23	8984411	17799367	12552284	8984411	12552284
24	3855036	5161133	2631154	3855036	2631154
25	34860547	45698787	14178085	34860547	14178085
26	19432615	23737707	13091559	19432615	13091559
27	12747267	31260340	24980660	12747267	24980660
28	9634811	10804116	6061514	9634811	6061514
29	12910284	17979671	5069387	12910284	5069387
30	4685033	8836659	5195694	4685033	5195694

	EBIT	TIE	NI	NI	CSE
1	30390471		21182442	21182442	343079000
2	30856000	48067000	12634000	12634000	75902000
3	19004039	48974281	11381244	11381244	70047459
4	25503003	60013653	12205120	12205120	65495798
5	9934000		9734000	9734000	152388000
6	24367000	17734000	4539000	4539000	30027000
7	6577885		4271685	4271685	9471536
8	1739990		1074290	1074290	19397918
9	3090897		718938	718938	20610547
10	500424		-420113	-420113	8616897
11	1321252		813227	813227	14538528
12	3175325		837440	837440	19703060
13	3175508		1225924	1225924	6896660
14	2938498		1911900	1911900	11715577
15	-4570331		-6878915	-6878915	67083945
16	3546069		2314616	2314616	2277173
17	-860578		-731143	-731143	8575987
18	1739990		1074290	1074290	19397918
19	2343048		456731	456731	9965945
20	4297324		2605834	2605834	9151793
21	2418940		1177284	1177284	3308876
22	1444893		697792	697792	6579356
23	3418463	443024	1742097	1742097	8188805
24	1377063		861222	861222	1306096
25	1757480	2615793	818590	818590	4889700
26	435827		-223902	-223902	4156238
27	-391329		-639574	-639574	16608429
28	949658		410193	410193	809472
29	1240140		682580	682580	5062424
30	1038929		655979	655979	4060349

Appendix 3.9 Top Listed Companies in Russia (Global Rank 8)

	RANKING	NAME			CR	QR
1	17	Gazprom	872711	GAZPROM	1.62	1.1
2	59	Rosneft	36205M	OC ROSNEFT	2.15	1.65
3	61	Sberbank	872749	SBERBANK OF RUSSIA		
4	64	Lukoil	872725	OIL COMPANY LUK(	1.95	0.95
5	159	TNK-BP Holding		Acquired by Rosnefid of 2012		
6	187	Surgutneftegas	872752	SURGUTNEFTEGAS	5.6	4.77
7	233	VTB Bank	50608R	VTB BANK		
8	385	Norilsk Nickel	14653D	MMC NORILSK NICI	1.72	0.91
9	484	Tatneft	872755	TATNEFT	1.83	1.18
10	547	Transneft	26030Q	TRANSNEFT PREF.	3.03	2.7
11	578	Novatek	30021E	NOVATEK	1.06	0.72
12	647	Rostelecom	872743	ROSTELECOM	0.43	0.37
13	657	Inter Rao	53611Q	INTER RAO UES	1.61	1.03
14	696	MegaFon	87890N	MEGAFON	0.69	0.44
15	706	RusHydro	51590W	RUSHYDRO	0.91	0.78
16	713	Novolipetsk Steel	872736	NOVOLIPETSK STEE	1.66	0.74
17	725	Severstal	872750	SEVERSTAL	1.69	0.91
18	759	Magnit	35790U	MAGNIT	0.75	0.19
19	790	Sistema	29899E	SISTEMA JSFC	0.99	0.72
20	797	IDGC Holding	53612C	ROSSETI	0.81	0.62
21	821	Federal Grid of UES	53679M	FED.GRID CO.OF UI	1.31	1.15
22	884	Uralkali	261658	URALKALI	1.99	1.56
23	978	Mechel	28747R	MECHEL OAO	1.11	0.5
24	1022	UC Rusal	9522C6	UNITED COMPANY	1.5	0.51
25	1168	Alrosa	774439	ALROSA	1.29	0.25
26	1475	Nomos Bank	75806E	BK OTKRITIE		
27	1509	X5 Retail Group		Joined magnit end of 2012		
28	1596	Magnitogorsk Iron & Steel	872726	MAGNITOGORSK IC	1.07	0.48
29	1761	PhosAgro	77440X	PHOSAGRO	1.02	0.58
30	1974	Aeroflot-Russian Airlines	892265	AEROFLOT RUSS.AI	1.04	0.64

	TL	TA	TC	TL2	TC2
1	3367045000	12068139000	9879028000	3367045000	9879028000
2	1577000000	3843000000	3111000000	1577000000	3111000000
3	13466100000	15089900000	2610100000	13466100000	2610100000
4	739731119	3007090741	2449602915	739731119	2449602915
5					
6	256976000	2070324000	1821846000	256976000	1821846000
7	6606700000	7372800000	1917300000	6606700000	1917300000
8	243459680	638936489	471790997	243459680	471790997
9	181741000	627974000	484224000	181741000	484224000
10	823944000	1996999000	1717158000	823944000	1717158000
11	170770000	462071000	389106000	170770000	389106000
12	321371000	577337000	406873000	321371000	406873000
13	172367000	526660000	398670000	172367000	398670000
14	228891000	349137000	246787000	228891000	246787000
15	316352000	854747000	605678000	316352000	605678000
16	217532569	556477893	426054012	217532569	426054012
17	256454058	476968840	352816567	256454058	352816567
18	122049920	221905185	138340813	122049920	138340813
19	926983307	1356287686	842489350	926983307	842489350
20	474339000	969025000	683449000	474339000	683449000
21	352445000	1260241000	1100996000	352445000	1100996000
22	168184154	436050529	354060485	168184154	354060485
23	430941452	539121688	361152662	430941452	361152662
24	439456031	778942614	657426711	439456031	657426711
25	166860000	304709000	228206000	166860000	228206000
26	809542000	899903000	204997000	809542000	204997000
27					
28	193154052	493276329	368459692	193154052	368459692
29	53752000	115627000	76327000	53752000	76327000
30	138261015	187964565	107020181	138261015	107020181

	EBIT	TIE	NI	NI	CSE
1	1387447000		1182625000	1182625000	8391731000
2	445000000		341000000	341000000	2230000000
3	500800000	428600000	346200000	346200000	1608000000
4	425611640		340786617	340786617	2237377956
5					
6	224595000		180115000	180115000	1805477000
7	190700000	310700000	84800000	84800000	753800000
8	104676369		67203468	67203468	392145513
9	104637000		72429000	72429000	429208000
10	268981000		180514000	180514000	1135792000
11	91324000		69458000	69458000	290050000
12	58894000		35064000	35064000	255473000
13	-20477000		-22818000	-22818000	349115000
14	57102000		38306000	38306000	119728000
15	-13802000		-22802000	-22802000	514650000
16	30453112		18451688	18451688	339950031
17	45768318		24568194	24568194	219879605
18	36223815		25017312	25017312	99855266
19	126515669		25262310	25262310	281027929
20	54822000		16621000	16621000	309929000
21	21850000		7103000	7103000	907063000
22	60678445		49575936	49575936	267613778
23	-21939393		-53998884	-53998884	96334575
24	11489625		-10436668	-10436668	339486584
25	52363000		32634000	32634000	138297000
26		35244000	12574000	12574000	75285000
27					
28	4831217		-2818210	-2818210	295385113
29	32664000		20654000	20654000	49486000
30	14462682		6878290	6878290	54254284

Appendix 3.10 Top Listed Companies in Italy (Global Rank 9)

	RANKING	NAME			CR	QR
1	30	ENI	866154	ENI	1.43	1.15
2	145	ENEL SPA	275791	ENEL	1.08	0.98
3	154	UniCredit Group	929395	UNICREDIT		
4	412	EXOR	54810U	EXOR ORD	1.55	1.15
5	436	Generali Group	923375	ASSICURAZIONI GENERALI		
6	459	Intesa Sanpaolo	929420	INTESA SANPAOLO		
7	586	Telecom Italia	923374	TELECOM ITALIA	0.96	0.91
8	729	Luxottica Group	255249	LUXOTTICA	1.34	0.88
9	756	Atlantia	685756	ATLANTIA	1.32	1.26
10	826	Unipol Gruppo	505136	UNIPOL GRUPPO FINANZIARI		
11	1024	Banca MPS	672650	BANCA MONTE DEI PASCHI		
12	1068	Finmeccanica	936428	FINMECCANICA	0.96	0.46
13	1085	Mediolanum	866648	BANCA MEDIOLANUM		
14	1105	Terna	29096C	TERNA RETE ELETTI	1.67	1.66
15	1166	Banco Popolare	505838	BANCA POPOLARE DI MILANO		
16	1172	Prada		Prada went public in the middle of 2		
17	1183	UBI Banca	692474	BNC.DI DESIO E BRZA.RSP		
18	1280	Pirelli & C		Delisted in 2015	ne sources utilize	
19	1399	A2A	685120	A2A	1.3	1.16
20	1556	Banca Popolare dell'Emilia	307041	BANCA PPO.EMILIA ROMAGNA		
21	1635	Banca Popolare di Milano	505838	BANCA POPOLARE DI MILANO		
22	1650	Banco Carige	143488	BANCA CARIGE		
23	1743	Cattolica Assicurazioni	284294	CATTOLICA ASSICURAZIONI		
24	1754	Banca Popolare di Sondrio	143051	BANCA PPO.DI SONDRIO		
25	1775	Credito Emiliano	945849	CREDITO EMILIANO		
26	1782	Credito Valtellinese	307036	BCA.PICCOLO CDT.VALTELL		
27	1794	Saras	35918T	SARAS	1.22	0.71
28	1881	Prysmian	50483U	PRYSMIAN	1.24	0.93
29	1925	Italmobiliare	938615	ITALMOBILIARE	1.28	0.99

	TL	TA	TC	TL2	TC2
1	72015000	134728000	81992000	72015000	81992000
2	112193000	165351000	109117000	112193000	109117000
3	843835477	910288557	276155156	843835477	276155156
4	101359000	123027000	62625000	101359000	62625000
5	413831000	433807000	45809000	413831000	45809000
6	613440000	663639000	253437000	613440000	253437000
7	53082000	76123000	54561000	53082000	54561000
8	4279258	8272498	6045347	4279258	6045347
9	23022796	28471051	19473108	23022796	19473108
10	72533800	79700200	13789900	72533800	13789900
11	207217398	213672010	79932155	207217398	79932155
12	25517000	29220000	8012000	25517000	8012000
13	34514909	35846372	5321433	34514909	5321433
14	12354700	15149000	11703700	12354700	11703700
15	47622151	51678868	18885758	47622151	18885758
012 so this data is unavailable					
17	7984771	8812962	3197724	7984771	3197724
d for others so it's been removed from the body					
19	7979000	11676000	8068000	7979000	8068000
20	56031123	60794175	17512736	56031123	17512736
21	47622151	51678868	18885758	47622151	18885758
22	44351216	48029788	22926553	44351216	22926553
23	15954241	17498147	1688762	15954241	1688762
24	30211867	32151904	6938398	30211867	6938398
25	28573533	30558618	12243449	28573533	12243449
26	27390838	29377913	11638095	27390838	11638095
27	2656794	3853492	1621589	2656794	1621589
28	4732000	5891000	2592000	4732000	2592000
29	5497843	10296818	6995583	5497843	6995583

	EBIT	TIE	NI	NI	CSE
1	17430000		7788000	7788000	59199000
2	7752000		865000	865000	36771000
3	5918565	14342857	819096	819096	62784081
4			398000	398000	7164000
5	3011000		90000	90000	17236000
6	8594000	8418000	1605000	1605000	49613000
7	1971000		-1627000	-1627000	19378000
8	986813		541700	541700	3981372
9	1797917		808078	808078	3801055
10	1098800		298600	298600	5485800
11	-1681663	3926388	-3170335	-3170335	6451756
12	-513000		-828000	-828000	3398000
13	725661	225051	351023	351023	1331463
14	1077400		463600	463600	2794300
15	-225209	717856	-429694	-429694	4015086
16					
17	94447	125973	20201	20201	821177
18					
19	495000		260000	260000	2846000
20	468762	886910	-12491	-12491	4062727
21	-225209	717856	-429694	-429694	4015086
22	14328	666423	-63207	-63207	3625923
23	177074		61879	61879	1252048
24	194195	486327	34306	34306	1869925
25	357889	325150	121242	121242	1984718
26	-236284	530043	-322439	-322439	1981874
27	-92352		-90101	-90101	1196698
28	327000		168000	168000	1112000
29	-231394		-270294	-270294	1815691

Appendix 3.11 Top Listed Companies in India (Global Rank 10)

	RANKING	NAME			CR	QR
1	121	Reliance Industries	772033	RELIANCE INDUSTR	1.82	1.21
2	136	State Bank of India	146565	STATE BANK OF INDIA		
3	155	Oil & Natural Gas	140218	OIL & NATURAL GA	1.19	0.9
4	309	ICICI Bank	871546	ICICI BANK		
5	334	Tata Motors	777075	TATA MOTORS	0.88	0.63
6	350	Indian Oil	875360	INDIAN OIL	0.95	0.41
7	377	Coal India	70899M	COAL INDIA	2.56	1.98
8	384	NTPC	29697C	NTPC	2.06	1.72
9	456	Bharti Airtel	15230E	BHARTI AIRTEL	0.3	0.25
10	463	HDFC Bank	871321	HDFC BANK		
11	527	Larsen & Toubro	772046	LARSEN & TOUBRO	1.37	1.23
12	561	HDFC	871321	HDFC BANK		
13	590	Tata Steel	147971	TATA STEEL	1.19	0.65
14	636	Tata Consultancy Services	29305F	TATA CONSULTANC	2.37	2.27
15	678	Axis Bank	675854	AXIS BANK		
16	717	Punjab National Bank	15481U	PUNJAB NATIONAL BANK		
17	727	Bank of Baroda	889486	BANK OF BARODA		
18	770	Bharat Heavy Electicals	146995	BHARAT HEAVY ELS	1.68	1.21
19	788	Infosys	147535	INFOSYS	7.09	6.94
20	812	Wipro	148375	WIPRO	2.32	2.14
21	816	Mahindra & Mahindra	148049	MAHINDRA & MAH	1.32	0.94
22	841	ITC	772022	ITC	1.7	0.99
23	895	Hindalco Industries	772020	HINDALCO INDUSTI	1.63	0.96
24	920	Canara Bank	26631V	CANARA BANK		
25	962	GAIL India	890916	GAIL (INDIA)	0.9	0.4
26	973	Bank of India	890875	BANK OF INDIA		
27	985	Steel Authority of India	146699	STEEL AUTHORITY (	1.51	0.73
28	1056	Power Grid of India	51128T	POWER GRID CORP	0.65	0.46
29	1112	Bharat Petroleum	147470	BHARAT PETROLEU	0.85	0.44
30	1174	NMDC	35760U	NMDC	2.99	2.04

	TL	TA	TC	TL2	TC2
1	1569470000	3271910000	2355960000	1569470000	2355960000
2	17194660301	18294217121	2679470415	17194660301	2679470415
3	1267716990	2654192570	1438561410	1267716990	1438561410
4	5386838215	6013880422	2325679120	5386838215	2325679120
5	1073862500	1403918800	609681100	1073862500	609681100
6	1575094800	2198265800	806275000	1575094800	806275000
7	652459300	1057571300	418444800	652459300	418444800
8	803906000	1552620000	1297233400	803906000	1297233400
9	985531000	1519339000	1030962000	985531000	1030962000
10	3091952679	3395896716	581125436	3091952679	581125436
11	899562400	1210964800	672958500	899562400	672958500
12	3091952679	3395896716	581125436	3091952679	581125436
13	1030265600	1467738200	912605000	1030265600	912605000
14	110004500	411384500	302533700	110004500	302533700
15	2617073554	2843890698	567533865	2617073554	567533865
16	4404773100	4700125700	890342400	4404773100	890342400
17	4287926178	4574001027	522055433	4287926178	522055433
18	404727700	658808000	256901000	404727700	256901000
19	45440000	380320000	334880000	45440000	334880000
20	147241000	433404000	308673000	147241000	308673000
21	422356500	634772000	372814100	422356500	372814100
22	104478400	300635100	197210500	104478400	197210500
23	677819000	1014022700	707475800	677819000	707475800
24	3558784287	3790833084	388193026	3558784287	388193026
25	251375700	510340900	352374800	251375700	352374800
26	3661015219	3875784228	535958459	3661015219	535958459
27	382224500	784956100	526714100	382224500	526714100
28	699230200	928233200	729060300	699230200	729060300
29	608985400	778131700	231036900	608985400	231036900
30	107524000	351587600	244063600	107524000	244063600

	EBIT	TIE	NI	NI	CSE
1	275480000		197240000	197240000	1694450000
2	344549499	893195528	153430996	153430996	1062300133
3	431866290		281436160	281436160	1364391300
4	204206491	250132455	76429320	76429320	612764960
5	159385300		135165000	135165000	326985000
6	89337300		42259800	42259800	603733600
7	213088600		148240700	148240700	404576000
8	148230900		98146600	98146600	742758100
9	95791000		42594000	42594000	506113000
10	100889952	151061242	52470218	52470218	302107451
11	95462200		46936900	46936900	293867800
12	100889952	151061242	52470218	52470218	302107451
13	124695800		52162600	52162600	426336800
14	139454100		103879200	103879200	294792300
15	80632546	139691770	42197789	42197789	226817144
16	93829100	237414000	50254600	50254600	292038400
17	78816128	197243435	52485738	52485738	285163033
18	104203000		70874400	70874400	254030600
19	116830000		83160000	83160000	334610000
20	70474000		55730000	55730000	285314000
21	58813800		31044500	31044500	167163900
22	92377100		62581400	62581400	194585800
23	60635100		33969500	33969500	319113200
24	52740968	231594713	33416959	33416959	230433972
25	66811700		44436100	44436100	249145300
26	57960034	202163002	27248560	27248560	214140011
27	60289400		35930900	35930900	402731600
28	78787900		33029900	33029900	227597100
29	26225800		7808300	7808300	158794900
30	107597000		72653900	72653900	244063600